

=> d his ful

FILE 'REGISTRY' ENTERED AT 13:11:13 ON 07 AUG 2006
 E AMMONIUM HYDROXIDE/CN
 L1 1 SEA ABB=ON PLU=ON "AMMONIUM HYDROXIDE"/CN
 E POTASSIUM HYDROXIDE/CN
 L2 1 SEA ABB=ON PLU=ON "POTASSIUM HYDROXIDE"/CN
 E CALCIUM HYDROXIDE/CN
 L3 1 SEA ABB=ON PLU=ON "CALCIUM HYDROXIDE"/CN
 E BARIUM HYDROXIDE/CN
 L4 1 SEA ABB=ON PLU=ON "BARIUM HYDROXIDE"/CN
 E LITHIUM HYDROXIDE/CN
 L5 1 SEA ABB=ON PLU=ON "LITHIUM HYDROXIDE"/CN
 E STRONTIUM HYDROXIDE/CN
 L6 1 SEA ABB=ON PLU=ON "STRONTIUM HYDROXIDE"/CN
 E RUBIDIUM HYDROXIDE/CN
 L7 1 SEA ABB=ON PLU=ON "RUBIDIUM HYDROXIDE"/CN
 E CESIUM HYDROXIDE
 E CESIUM HYDROXIDE/CN
 L8 1 SEA ABB=ON PLU=ON "CESIUM HYDROXIDE"/CN
 L9 8 SEA ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8)
 L10 7 SEA ABB=ON PLU=ON L1 OR (L3 OR L4 OR L5 OR L6 OR L7 OR L8)
 E 1,3-PROPANEDIOL/CN
 L11 1 SEA ABB=ON PLU=ON "1,3-PROPANEDIOL"/CN

FILE 'CAPLUS' ENTERED AT 13:28:37 ON 07 AUG 2006
 L12 3811 SEA ABB=ON PLU=ON VISCOSITY/OBI (L) (DECREAS?/OBI OR REDUC?/OBI)
 L13 83241 SEA ABB=ON PLU=ON L9
 L14 35 SEA ABB=ON PLU=ON L12 AND L13
 L15 60225 SEA ABB=ON PLU=ON L13 (L) (MOA OR RGT OR RACT OR USES)/RL
 L16 31 SEA ABB=ON PLU=ON L15 AND L14
 L17 35160 SEA ABB=ON PLU=ON L2
 L18 19 SEA ABB=ON PLU=ON L17 AND L12
 L19 14 SEA ABB=ON PLU=ON L16 NOT L18
 L20 2441 SEA ABB=ON PLU=ON ALKALINE/OBI (W) (EARTH/OBI OR METAL/OBI) (W) HYDROXIDE#/OBI
 L21 3 SEA ABB=ON PLU=ON L20 AND L12
 L22 32 SEA ABB=ON PLU=ON L16 OR L21
 L23 15 SEA ABB=ON PLU=ON L22 NOT L18
 E HYDROFORMYLATION/CT
 E E3+ALL
 L24 6563 SEA ABB=ON PLU=ON HYDROFORMYLATION#/OBI
 L25 4 SEA ABB=ON PLU=ON L24 AND L20
 L26 1 SEA ABB=ON PLU=ON L24 AND L12
 L27 5 SEA ABB=ON PLU=ON L25 OR L26
 L28 5 SEA ABB=ON PLU=ON L27 NOT (L23 OR L18)
 L29 334 SEA ABB=ON PLU=ON KNIFTON J?/AU
 L30 1096 SEA ABB=ON PLU=ON JAMES T?/AU
 L31 41 SEA ABB=ON PLU=ON WEIDER P?/AU
 L32 2320 SEA ABB=ON PLU=ON POWELL J?/AU
 L33 34 SEA ABB=ON PLU=ON NEILSEN E?/AU
 L34 13 SEA ABB=ON PLU=ON KOMPLIN G?/AU
 L35 3792 SEA ABB=ON PLU=ON (L29 OR L30 OR L31 OR L32 OR L33 OR L34)
 L36 2 SEA ABB=ON PLU=ON L35 AND L12
 L37 8 SEA ABB=ON PLU=ON L35 AND L13
 L38 1 SEA ABB=ON PLU=ON L35 AND L20
 L39 9 SEA ABB=ON PLU=ON (L36 OR L37 OR L38)

Maria Louisa Lao 10/6767682

| | | | | |
|-----|------|------------|--------|------------------------------------|
| L40 | 8 | SEA ABB=ON | PLU=ON | L39 NOT (L18 OR L23 OR L28) |
| L41 | 5257 | SEA ABB=ON | PLU=ON | L11 |
| L42 | 32 | SEA ABB=ON | PLU=ON | L41 AND L35 |
| L43 | 1 | SEA ABB=ON | PLU=ON | L42 AND L13 |
| | | D SCAN | | |
| L44 | 0 | SEA ABB=ON | PLU=ON | L43 NOT (L18 OR L23 OR L28 OR L40) |

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:46:00 ON 07 AUG 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 AUG 2006 HIGHEST RN 899126-84-2

DICTIONARY FILE UPDATES: 6 AUG 2006 HIGHEST RN 899126-84-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d que l9; d l9 1-8 rn cn ; d que l11;d l11

| | | | | | |
|----|---|-------------------|--------|--------|---|
| L1 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "AMMONIUM HYDROXIDE"/CN |
| L2 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "POTASSIUM HYDROXIDE"/CN |
| L3 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "CALCIUM HYDROXIDE"/CN |
| L4 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "BARIUM HYDROXIDE"/CN |
| L5 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "LITHIUM HYDROXIDE"/CN |
| L6 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "STRONTIUM HYDROXIDE"/CN |
| L7 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "RUBIDIUM HYDROXIDE"/CN |
| L8 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "CESIUM HYDROXIDE"/CN |
| L9 | 8 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8) |

L9 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 21351-79-1 REGISTRY

CN Cesium hydroxide (Cs(OH)) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cesium hydroxide (6CI, 8CI)

OTHER NAMES:

CN NSC 121987

L9 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 18480-07-4 REGISTRY

CN Strontium hydroxide (Sr(OH)2) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Strontium hydroxide (8CI)

OTHER NAMES:

CN Strontium dihydroxide

CN Strontium(II) hydroxide

L9 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 17194-00-2 REGISTRY

CN Barium hydroxide (Ba(OH)2) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Barium hydroxide (8CI)

OTHER NAMES:

CN Barium dihydroxide

CN Caustic baryta

L9 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 1336-21-6 REGISTRY

CN Ammonium hydroxide ((NH4)(OH)) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ammonium hydroxide (8CI)

OTHER NAMES:

CN Ammonia water

CN Ammonia, aqua

CN Ammonia, monohydrate

CN Aqua ammonia

CN SX 1

CN SX 1 (ammonia water)

L9 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 1310-82-3 REGISTRY

CN Rubidium hydroxide (Rb(OH)) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Rubidium hydroxide (7CI, 8CI)

L9 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 1310-65-2 REGISTRY

CN Lithium hydroxide (Li(OH)) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Lithium hydroxide (8CI)

OTHER NAMES:

CN Lithium hydrate

L9 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 1310-58-3 REGISTRY

CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Potassium hydroxide (8CI)

OTHER NAMES:

CN Caustic potash

CN Cyantek CC 723

CN Potash

CN PSE 200

L9 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN

RN 1305-62-0 REGISTRY

CN Calcium hydroxide (Ca(OH)2) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Calcium hydroxide (8CI)

OTHER NAMES:

CN A-Rock

CN Biocalc

CN Cal-Z

CN Calbit

CN Calbreed

CN Calcicure

CN Calcium dihydroxide

CN Caldic 1000

CN Caldic 2000

CN Calvit

CN Carboxide
 CN CH 2N
 CN CLS-B
 CN Ecolomaster
 CN Hydralime
 CN Hydrated lime
 CN Kalkhydrate
 CN Karutekku LT
 CN Kentoku K 100
 CN Limbux
 CN Lime hydrate
 CN Lime milk
 CN Lime water
 CN LoFloSorb
 CN Microstar T
 CN Milk of lime
 CN NICC 3000
 CN Precal 54
 CN Rhenofit CF
 CN SA 074
 CN Slaked lime
 CN Super Microstar
 CN Superia
 CN TempCanal
 CN TP 2B
 CN Yukijirushi Shosekkai
 CN Yukijirushisakanyo

L11 1 SEA FILE=REGISTRY ABB=ON PLU=ON "1,3-PROPANEDIOL"/CN

L11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 504-63-2 REGISTRY

ED Entered STN: 16 Nov 1984

CN 1,3-Propanediol (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN β -Propylene glycol

CN ω -Propanediol

CN 1,3-Dihydroxypropane

CN 1,3-Propylene glycol

CN 1,3-Propylenediol

CN 2-Deoxyglycerol

CN NSC 65426

CN PG

CN Trimethylene glycol

FS 3D CONCORD

DR 757125-93-2

MF C3 H8 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
 (*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

HO-CH₂-CH₂-CH₂-OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5247 REFERENCES IN FILE CA (1907 TO DATE)
291 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5257 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> fil caplus

FILE 'CAPLUS' ENTERED AT 13:47:09 ON 07 AUG 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 7 Aug 2006 VOL 145 ISS 7
FILE LAST UPDATED: 6 Aug 2006 (20060806/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d que 118

L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON "POTASSIUM HYDROXIDE"/CN
L12 3811 SEA FILE=CAPLUS ABB=ON PLU=ON VISCOSITY/OBI (L) (DECREAS?/OBI
OR REDUC?/OBI)
L17 35160 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L18 19 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND L12

=> d que 123

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON "AMMONIUM HYDROXIDE"/CN
L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON "POTASSIUM HYDROXIDE"/CN
L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON "CALCIUM HYDROXIDE"/CN
L4 1 SEA FILE=REGISTRY ABB=ON PLU=ON "BARIUM HYDROXIDE"/CN
L5 1 SEA FILE=REGISTRY ABB=ON PLU=ON "LITHIUM HYDROXIDE"/CN
L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON "STRONTIUM HYDROXIDE"/CN
L7 1 SEA FILE=REGISTRY ABB=ON PLU=ON "RUBIDIUM HYDROXIDE"/CN
L8 1 SEA FILE=REGISTRY ABB=ON PLU=ON "CESIUM HYDROXIDE"/CN
L9 8 SEA FILE=REGISTRY ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5
OR L6 OR L7 OR L8)

L12 3811 SEA FILE=CAPLUS ABB=ON PLU=ON VISCOSITY/OBI (L) (DECREAS?/OBI
OR REDUC?/OBI)
L13 83241 SEA FILE=CAPLUS ABB=ON PLU=ON L9
L14 35 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND L13
L15 60225 SEA FILE=CAPLUS ABB=ON PLU=ON L13 (L) (MOA OR RGT OR RACT OR
USES)/RL
L16 31 SEA FILE=CAPLUS ABB=ON PLU=ON L15 AND L14
L17 35160 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L18 19 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND L12
L20 2441 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE/OBI (W) (EARTH/OBI
OR METAL/OBI) (W) HYDROXIDE#/OBI
L21 3 SEA FILE=CAPLUS ABB=ON PLU=ON L20 AND L12
L22 32 SEA FILE=CAPLUS ABB=ON PLU=ON L16 OR L21
L23 15 SEA FILE=CAPLUS ABB=ON PLU=ON L22 NOT L18

=> d que 140

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON "AMMONIUM HYDROXIDE"/CN
L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON "POTASSIUM HYDROXIDE"/CN
L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON "CALCIUM HYDROXIDE"/CN
L4 1 SEA FILE=REGISTRY ABB=ON PLU=ON "BARIUM HYDROXIDE"/CN
L5 1 SEA FILE=REGISTRY ABB=ON PLU=ON "LITHIUM HYDROXIDE"/CN
L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON "STRONTIUM HYDROXIDE"/CN
L7 1 SEA FILE=REGISTRY ABB=ON PLU=ON "RUBIDIUM HYDROXIDE"/CN
L8 1 SEA FILE=REGISTRY ABB=ON PLU=ON "CESIUM HYDROXIDE"/CN
L9 8 SEA FILE=REGISTRY ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4 OR L5
OR L6 OR L7 OR L8)
L12 3811 SEA FILE=CAPLUS ABB=ON PLU=ON VISCOSITY/OBI (L) (DECREAS?/OBI
OR REDUC?/OBI)
L13 83241 SEA FILE=CAPLUS ABB=ON PLU=ON L9
L14 35 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND L13
L15 60225 SEA FILE=CAPLUS ABB=ON PLU=ON L13 (L) (MOA OR RGT OR RACT OR
USES)/RL
L16 31 SEA FILE=CAPLUS ABB=ON PLU=ON L15 AND L14
L17 35160 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L18 19 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND L12
L20 2441 SEA FILE=CAPLUS ABB=ON PLU=ON ALKALINE/OBI (W) (EARTH/OBI
OR METAL/OBI) (W) HYDROXIDE#/OBI
L21 3 SEA FILE=CAPLUS ABB=ON PLU=ON L20 AND L12
L22 32 SEA FILE=CAPLUS ABB=ON PLU=ON L16 OR L21
L23 15 SEA FILE=CAPLUS ABB=ON PLU=ON L22 NOT L18
L24 6563 SEA FILE=CAPLUS ABB=ON PLU=ON HYDROFORMYLATION#/OBI
L25 4 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L20
L26 1 SEA FILE=CAPLUS ABB=ON PLU=ON L24 AND L12
L27 5 SEA FILE=CAPLUS ABB=ON PLU=ON L25 OR L26
L28 5 SEA FILE=CAPLUS ABB=ON PLU=ON L27 NOT (L23 OR L18)
L29 334 SEA FILE=CAPLUS ABB=ON PLU=ON KNIFTON J?/AU
L30 1096 SEA FILE=CAPLUS ABB=ON PLU=ON JAMES T?/AU
L31 41 SEA FILE=CAPLUS ABB=ON PLU=ON WEIDER P?/AU
L32 2320 SEA FILE=CAPLUS ABB=ON PLU=ON POWELL J?/AU
L33 34 SEA FILE=CAPLUS ABB=ON PLU=ON NEILSEN E?/AU
L34 13 SEA FILE=CAPLUS ABB=ON PLU=ON KOMPLIN G?/AU
L35 3792 SEA FILE=CAPLUS ABB=ON PLU=ON (L29 OR L30 OR L31 OR L32 OR
L33 OR L34)
L36 2 SEA FILE=CAPLUS ABB=ON PLU=ON L35 AND L12
L37 8 SEA FILE=CAPLUS ABB=ON PLU=ON L35 AND L13
L38 1 SEA FILE=CAPLUS ABB=ON PLU=ON L35 AND L20
L39 9 SEA FILE=CAPLUS ABB=ON PLU=ON (L36 OR L37 OR L38)
L40 8 SEA FILE=CAPLUS ABB=ON PLU=ON L39 NOT (L18 OR L23 OR L28)

=> d que 144

| | | | | | |
|-----|-------|-------------------|--------|--------|---|
| L1 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "AMMONIUM HYDROXIDE"/CN |
| L2 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "POTASSIUM HYDROXIDE"/CN |
| L3 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "CALCIUM HYDROXIDE"/CN |
| L4 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "BARIUM HYDROXIDE"/CN |
| L5 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "LITHIUM HYDROXIDE"/CN |
| L6 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "STRONTIUM HYDROXIDE"/CN |
| L7 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "RUBIDIUM HYDROXIDE"/CN |
| L8 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "CESIUM HYDROXIDE"/CN |
| L9 | 8 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8) |
| L11 | 1 | SEA FILE=REGISTRY | ABB=ON | PLU=ON | "1,3-PROPANEDIOL"/CN |
| L12 | 3811 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | VISCOSITY/OBI (L) (DECREAS?/OBI OR REDUC?/OBI) |
| L13 | 83241 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L9 |
| L14 | 35 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L12 AND L13 |
| L15 | 60225 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L13 (L) (MOA OR RGT OR RACT OR USES)/RL |
| L16 | 31 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L15 AND L14 |
| L17 | 35160 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L2 |
| L18 | 19 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L17 AND L12 |
| L20 | 2441 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | ALKALINE/OBI (W) (EARTH/OBI OR METAL/OBI) (W) HYDROXIDE#/OBI |
| L21 | 3 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L20 AND L12 |
| L22 | 32 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L16 OR L21 |
| L23 | 15 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L22 NOT L18 |
| L24 | 6563 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | HYDROFORMYLATION#/OBI |
| L25 | 4 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L24 AND L20 |
| L26 | 1 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L24 AND L12 |
| L27 | 5 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L25 OR L26 |
| L28 | 5 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L27 NOT (L23 OR L18) |
| L29 | 334 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | KNIFTON J?/AU |
| L30 | 1096 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | JAMES T?/AU |
| L31 | 41 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | WEIDER P?/AU |
| L32 | 2320 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | POWELL J?/AU |
| L33 | 34 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | NEILSEN E?/AU |
| L34 | 13 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | KOMPLIN G?/AU |
| L35 | 3792 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | (L29 OR L30 OR L31 OR L32 OR L33 OR L34) |
| L36 | 2 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L35 AND L12 |
| L37 | 8 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L35 AND L13 |
| L38 | 1 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L35 AND L20 |
| L39 | 9 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | (L36 OR L37 OR L38) |
| L40 | 8 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L39 NOT (L18 OR L23 OR L28) |
| L41 | 5257 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L11 |
| L42 | 32 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L41 AND L35 |
| L43 | 1 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L42 AND L13 |
| L44 | 0 | SEA FILE=CAPLUS | ABB=ON | PLU=ON | L43 NOT (L18 OR L23 OR L28 OR L40) |

=> d .ca 118 1-19;d .ca 123 1-15;d ibib ab 140 1-8

L18 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2006:395399 CAPLUS
 DOCUMENT NUMBER: 144:470990
 TITLE: Method for applying poly(aspartic acid) in viscosity reduction of oil field
 INVENTOR(S): Rui, Xinsheng; Leng, Yixin

PATENT ASSIGNEE(S): Changmao Biochemical Engineering Co., Ltd., Peop. Rep. China; Jiangsu Polytechnic University
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|------------------|----------|
| CN 1760311 | A | 20060419 | CN 2005-10095060 | 20051027 |

PRIORITY APPLN. INFO.: CN 2005-10095060 20051027

ED Entered STN: 01 May 2006

AB The title method comprises: (1) using phosphoric acid or poly(phosphoric acid) as catalyst, and condensing L-aspartic acid at 150-300°C for 0.5-15 h to obtain polysuccinimide, (2) adding 30% NaOH or KOH, and hydrolyzing polysuccinimide at pH 9-10 to obtain poly(aspartic acid) (PASP), (3) preparing PASP solution of 100 mg/mL, and (4) adding the solution (0.02-5 weight%) into bentonite slurry. The weight ratio of the mentioned catalyst to L-aspartic acid is (0.01-1) : 1.

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

ST poly aspartic acid viscosity redn oil field bentonite

IT Viscosity
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT Polyphosphoric acids
 RL: CAT (Catalyst use); USES (Uses)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT Bentonite, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT 7664-38-2, Phosphoric acid, uses
 RL: CAT (Catalyst use); USES (Uses)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT 25608-40-6P, Poly(aspartic acid)
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT 56-84-8, L-Aspartic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

IT 31586-29-5P, Polysuccinimide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (method for applying poly(aspartic acid) in viscosity reduction of oil field)

L18 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:1093948 CAPLUS

DOCUMENT NUMBER: 143:389585
 TITLE: Preparation of heat-resistant and salt-resistant viscosity reducer for viscous crude oil
 INVENTOR(S): Ge, Jijiang; Zhang, Guicai; Sun, Mingqin; Zhang, Debin
 PATENT ASSIGNEE(S): University of Petroleum East China, Peop. Rep. China
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 4 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|------------------|----------|
| CN 1560176 | A | 20050105 | CN 2004-10023492 | 20040225 |
| PRIORITY APPLN. INFO.: | | | CN 2004-10023492 | 20040225 |

ED Entered STN: 12 Oct 2005

AB The invention relates to a heat-resistant and salt-resistant viscosity reducer containing polyoxyethylene ether acetate for viscous crude oil. The viscosity reducer is prepared through carboxy methylation of nonionic surfactant, polyoxyethylene ether with the existence of alkali. Preferably the polyoxyethylene ether is nonylphenyl polyoxyethylene ether with 15 monomeric units and the product is sodium nonylphenyl polyoxyethylene ether acetate. Viscosity reducer prepared can be used in condition with salt content of 2.0×10^5 mg/L at 150°C.

IC ICM C09K007-00
 ICS E21B043-22

CC 51-3 (Fossil Fuels, Derivatives, and Related Products)

ST heat salt resistant **viscosity reducer** viscous crude oil polyoxyethylene

IT Polyoxyalkylenes, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (ethers; preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

IT Thermal resistance
 (preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

IT Petroleum, processes
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
 (preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

IT Viscosity
 (reducing agents; preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

IT 102-71-6, Triethanolamine, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

IT 79-11-8, Chloroacetic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of heat-resistant and salt-resistant **viscosity reducer** for viscous crude oil)

L18 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:979721 CAPLUS
 DOCUMENT NUMBER: 143:289092
 TITLE: Orthoester compositions and methods for

reducing the viscosity of
viscosified treatment fluids

INVENTOR(S): Frost, Keith A.; Funkhouser, Gary P.; Todd, Bradley L.
PATENT ASSIGNEE(S): Halliburton Energy Services, Inc., USA; Wain,
Christopher Paul
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2005083029 | A1 | 20050909 | WO 2005-GB397 | 20050207 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |

PRIORITY APPLN. INFO.: US 2004-785300 A 20040224

OTHER SOURCE(S): MARPAT 143:289092

ED Entered STN: 08 Sep 2005

AB In one embodiment, the present invention provides a method of reducing the viscosity of a viscosified treatment fluid comprising contacting the viscosified treatment fluid with an acid generated from an orthoester composition that comprises an orthoester. In another embodiment, the present invention provides a method of reducing the pH of a viscosified treatment fluid comprising providing an orthoester composition that comprises an orthoester; contacting the viscosified treatment fluid with the orthoester composition; allowing the orthoester to generate a generated acid; and allowing the generated acid to at least partially reduce the pH of the viscosified treatment fluid. Embodiments of fracturing and gravel packing methods also are disclosed.

IC ICM C09K007-00
ICS E21B043-26

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

ST orthoester **reducing viscosity** gelation well treatment fluid fracturing packing; ortho carboxylic acid ester polyhydric alc treatment fluid thinner

IT Petroleum recovery
(by flooding, acid flooding; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Particles
(coated or impregnated with orthoesters; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Polysaccharides, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinked, in thickened treatment fluid; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Borates

- RL: MOA (Modifier or additive use); USES (Uses)
(crosslinker; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Ortho acids
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(esters, polymers; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Well treatment fluids
(fracturing and gravel packing fluids; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Juglans regia
(ground shells; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Seed
(hull, from walnut, ground; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Polymers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(hydratable, thickener for treatment fluid; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Fracture (materials)
(hydraulic; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Ionic strength
(increased with ortho-acids to **reduce viscosity**; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Sand
RL: TEM (Technical or engineered material use); USES (Uses)
(natural and quartz; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Viscosity
(of treatment fluids; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Coating process
(on-the-fly and batch; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Esters, uses
RL: FMU (Formation, unclassified); MOA (Modifier or additive use); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent); USES (Uses)
(ortho acid; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Emulsions
- Gelation agents
- Gels
- Gravel
(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Carboxylic acids, uses
RL: FMU (Formation, unclassified); MOA (Modifier or additive use); FORM (Formation, nonpreparative); USES (Uses)
(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)
- IT Ortho acids
RL: FMU (Formation, unclassified); MOA (Modifier or additive use); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent);

USES (Uses)

(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Amines, uses

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Bauxite

Glass, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Ceramics

(particulate; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Garnet-group minerals

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(particulate; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Alcohols, uses

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(polyhydric, esters; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT Pellets

(polymeric; orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT 9000-30-0, Guar gum 844494-85-5, WS 44

RL: MOA (Modifier or additive use); USES (Uses)

(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

IT 463-78-5D, Orthoformic acid, tri-O-esters 463-83-2D, Orthoacetic acid,

tri-O-esters 497-19-8, Sodium carbonate, uses 621-76-1, Tripropyl

orthoformate 1310-58-3, Potassium hydroxide, uses 1310-73-2,

Sodium hydroxide, uses 90041-36-4D, 1,1,1-Propanetriol, tri-O-esters

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(orthoester compns. and methods for **reducing viscosity** of viscosified treatment fluids)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:622520 CAPLUS

DOCUMENT NUMBER: 143:135973

TITLE: Process for preparation of tala viscosity-decreasing agent for drilling liquor

INVENTOR(S): Huang, Ronghua; Liang, Bing; Dai, Hua; Zhang, Xi; Cui, Ping

PATENT ASSIGNEE(S): Chengdu Huineng Science and Technology Development Co., Ltd., Peop. Rep. China; Sichuan University

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| CN 1414059 | A | 20030430 | CN 2002-133632 | 20020821 |
| PRIORITY APPLN. INFO.: | | | CN 2002-133632 | 20020821 |

ED Entered STN: 19 Jul 2005

AB The process comprises: (1) mixing tala pod powder with water or base solution at a ratio of 1:3-10, stirring, refluxing under heating, extracting at 20-100 °C for 0.5-8 h, filtering, washing, concentrating filter liquor to obtain liquid extract, or drying and breaking to obtain extract powder; and (2) mixing extract with polymer at a ratio of 5-20:1. The base may be NaOH or KOH, and the ratio of it to tala pod is 5-20%. The polymer may be acrylamide-potassium methacrylate, acrylamide-maleic anhydride, or acrylamide-acrylic acid copolymer. The viscosity-decreasing agent has a good effect.

IC ICM C09K007-02

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

ST tala viscosity decreasing agent drilling fluid acrylic polymer prep

IT Concentration (process)

Drilling fluids

Drying

Extraction

Filtration

Mixing

(Process for preparation of tala viscosity-decreasing agent for drilling liquor)

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(Process for preparation of tala viscosity-decreasing agent for drilling liquor)

IT Celtis tala

(powdered; Process for preparation of tala viscosity-decreasing agent for drilling liquor)

IT Viscosity

(thinning agents for; Process for preparation of tala viscosity-decreasing agent for drilling liquor)

IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(Process for preparation of tala viscosity-decreasing agent for drilling liquor)

IT 9003-06-9, Acrylic acid-acrylamide copolymer 27555-75-5,

Acrylamide-maleic anhydride copolymer 31212-13-2

RL: TEM (Technical or engineered material use); USES (Uses)

(Process for preparation of tala viscosity-decreasing agent for drilling liquor)

L18 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:517424 CAPLUS

DOCUMENT NUMBER: 143:64085

TITLE: Gluconate broth for cement and concrete admixture
INVENTOR(S): Chun, Byong-Wa; Jeknavorian, Ara A.; Porteneuve, Charlotte B.

PATENT ASSIGNEE(S): W. R. Grace & Co.-Conn., USA

SOURCE: PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

NOT AVAILABLE

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2005054149 | A1 | 20050616 | WO 2004-US38915 | 20041118 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004295325 | A1 | 20050616 | AU 2004-295325 | 20041118 |
| PRIORITY APPLN. INFO.: | | | US 2003-525968P | P 20031201 |
| | | | WO 2004-US38915 | W 20041118 |
| ED Entered STN: 16 Jun 2005. | | | | |
| AB Methods and compns. of the invention involve the use of crude intermediate fermentation broth, derived from industrial glucose fermentation processes prior to completion of purification steps, as additives and admixes for cementitious compns. | | | | |
| IC ICM C04B024-10 | | | | |
| CC 58-2 (Cement, Concrete, and Related Building Materials) | | | | |
| Section cross-reference(s): 38 | | | | |
| IT Concrete modifiers | | | | |
| (shrinkage reducing- and viscosity modifying- and anti-efflorescence agents; gluconate broth for cement and concrete admixt.) | | | | |
| IT 50-00-0, Formaldehyde, uses 50-21-5, uses 56-40-6D, Glycine, derivs. 57-50-1, Sucrose, uses 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 65-85-0, Benzoic acid, uses 69-72-7D, Salicylic acid, derivs. 77-92-9D, Citric acid, derivs. 87-69-4D, Tartaric acid, derivs. 108-95-2, Phenol, uses 110-15-6, Butanedioic acid, uses 144-62-7, Oxalic acid, uses 526-95-4, D-Gluconic acid 526-99-8D, Mucic acid, derivs. 544-17-2, Calcium formate 1310-58-3, Potassium hydroxide, uses 4316-73-8, Sodium sarcosinate 6915-15-7D, Malic acid, derivs. 7647-14-5, Sodium chloride, uses 8061-51-6, Sodium lignosulfonate 8061-52-7, Calcium lignosulfonate 9003-01-4, Polyacrylic acid 9003-08-1D, Formaldehyde-melamine condensate, sulfonated 9003-39-8, Polyvinylpyrrolidone 9005-25-8, Starch, uses 9005-53-2, Lignin, uses 10043-52-4, Calcium chloride, uses 13408-62-3, Ferricyanide 14906-97-9D, Gluconic acid, sodium salt, derivs. 23351-51-1D, Glucoheptonic acid, derivs. 25852-26-0D, Formaldehyde-naphthalene copolymer, sulfonated | | | | |
| RL: MOA (Modifier or additive use); USES (Uses) | | | | |
| (gluconate broth for cement and concrete admixt.) | | | | |
| REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | | | |
| L18 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN | | | | |
| ACCESSION NUMBER: 2005:509760 CAPLUS | | | | |
| DOCUMENT NUMBER: 144:192775 | | | | |
| TITLE: Preparation and characterisation of alkyd resins using crude and refined rubber seed oil | | | | |
| AUTHOR(S): Ikhuoria, E. U.; Okieimen, F. E. | | | | |
| CORPORATE SOURCE: Industrial Agriculture Products Research Laboratory, | | | | |

SOURCE: Department of Chemistry, University of Benin, Benin City, Nigeria
Pakistan Journal of Scientific and Industrial Research (2005), 48(1), 68-73
CODEN: PSIRAA; ISSN: 0030-9885
PUBLISHER: Pakistan Council of Scientific and Industrial Research
DOCUMENT TYPE: Journal
LANGUAGE: English

ED Entered STN: 15 Jun 2005

AB Six different alkyds were formulated with crude rubber seed oil 45% (I), 50% (II) and 55% (III); refined rubber seed oil 45% (IV), 50% (V) and 55% (VI); phthalic anhydride and glycerol. All the alkyds were formulated to alkyd constant of about 1.0. The alcoholysis method was used. Refining enhanced the quality of rubber seed oil in alkyd resin manufacture. The properties of the finished alkyd resins such as viscosity, number average mol. wts., drying schedule, chemical resistance and film hardness were determined.

The intrinsic viscosity (η) was observed to be proportional to the number average mol. weight of the two sets of alkyd resins. However, samples I-III exhibited higher intrinsic viscosity in toluene than samples IV-VI. On the contrary, the films of samples IV-VI were harder, dried faster, and were more chemical resistant than those of samples I-III. The practical implications of these results are discussed.

CC 37-3 (Plastics Manufacture and Processing)

IT Viscosity

(intrinsic and reduced; preparation and characterization of alkyd resins using crude and refined rubber seed oil)

IT 1310-58-3, Potassium hydroxide, uses 7647-14-5, Sodium chloride, uses 7664-93-9, Sulfuric acid, uses

RL: NUU (Other use, unclassified); USES (Uses)

(resistance to; preparation and characterization of alkyd resins using crude and refined rubber seed oil)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

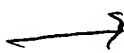
L18 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:308390 CAPLUS

DOCUMENT NUMBER: 140:323182

TITLE: Reduction of the viscosity of

Applicant



INVENTOR(S): reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide
James, Talmadge Gail; Komplin, Glenn Charles; Nielsen, Edward Lewis; Knifton, John Frederick; Powell, Joseph Broun; Weider, Paul Richard

PATENT ASSIGNEE(S): Shell Oil Company, USA

SOURCE: PCT Int. Appl., 15 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2004031108 | A1 | 20040415 | WO 2003-US31216 | 20031002 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, | | | | |

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---------------|----|----------|-----------------|----------|
| US 2005043570 | A1 | 20050224 | US 2003-676682 | 20031001 |
| CA 2500615 | AA | 20040415 | CA 2003-2500615 | 20031002 |
| AU 2003279749 | A1 | 20040423 | AU 2003-279749 | 20031002 |
| EP 1546075 | A1 | 20050629 | EP 2003-773090 | 20031002 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

| | | | | |
|---------------|----|----------|------------------|----------|
| BR 2003015025 | A | 20050816 | BR 2003-15025 | 20031002 |
| CN 1703388 | A | 20051130 | CN 2003-80100866 | 20031002 |
| JP 2006502202 | T2 | 20060119 | JP 2004-542042 | 20031002 |

PRIORITY APPLN. INFO.:
 US 2002-415676P P 20021003
 WO 2003-US31216 W 20031002

ED Entered STN: 15 Apr 2004

AB An improvement upon the process for the production of 1,3-propanediol is presented where an aqueous solution of 3-hydroxypropanal is formed, the catalyst, if any, used in the formation is removed from the solution, sodium hydroxide is added to the solution to neutralize any acid therein such that the pH is ≥ 5 , the neutralized aqueous solution is subjected to hydrogenation to produce a crude 1,3-propanediol mixture which is distilled to produce 1,3-propanediol, water, and reactive heavy components. The improvement comprises replacing the sodium hydroxide with a hydroxide selected from the group consisting of ammonium hydroxide, alkali metal hydroxides other than sodium hydroxide, and alkaline earth metal hydroxides to reduce the viscosity of the reactive heavy components.

IC ICM C07C029-14
 ICS C07C031-20

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 23, 48

ST propanediol manuf hydrogenation hydroxypropanal byproduct
viscosity redn

IT Alkaline earth hydroxides
 RL: MOA (Modifier or additive use); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)
 (neutralization agents; **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)

IT Neutralization
 (of acidity in a **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)


IT Alkali metal hydroxides
 RL: MOA (Modifier or additive use); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)
 (other than NaOH, neutralization agents; **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)

IT **Viscosity**
 (**reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)

IT 1333-74-0, Hydrogen, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)

- IT 1305-62-0, Calcium hydroxide, reactions 1310-58-3, Potassium hydroxide, reactions 1310-65-2, Lithium hydroxide 1310-82-3, Rubidium hydroxide 1336-21-6, Ammonium hydroxide 17194-00-2, Barium hydroxide 18480-07-4, Strontium hydroxide 21351-79-1, Cesium hydroxide
 RL: MOA (Modifier or additive use); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)
 (neutralization agent; **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)
- IT 1310-73-2, Sodium hydroxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (neutralization agent; **reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)
- IT 504-63-2P, 1,3-Propanediol
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); PREP (Preparation); PROC (Process)
 (**reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)
- IT 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (**reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)
- IT 2134-29-4, 3-Hydroxypropanal
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**reduction** of the **viscosity** of reactive heavy byproducts during the production of 1,3-propanediol using other than sodium hydroxide)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:467271 CAPLUS
 DOCUMENT NUMBER: 139:40427
 TITLE: Procedure for decrease of foaming in glass-melting furnace
 INVENTOR(S): Hessenkemper, Heiko
 PATENT ASSIGNEE(S): Germany
 SOURCE: Ger. Offen., 12 pp. 
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|------------------|----------|
| DE 10158636 | A1 | 20030618 | DE 2001-10158636 | 20011129 |
| PRIORITY APPLN. INFO.: | | | DE 2001-10158636 | 20011129 |

ED Entered STN: 19 Jun 2003

AB A procedure for the foaming destabilization in glass fusion aggregates is described, which is based on thermal and chemical compensation of alkali depletion in the melted phase in the thin foam-forming layer. The alkali (especially Na₂O, Li₂O, and K₂O) depletion is caused by the high alkali mobility in the volume of the glass melt and results in a significant viscosity increase and foam stabilization. The viscosity increase of these surfaces is compensated by supply of network-changing substances, whereby the

foaming decay is reached. The alkali network-changing substances are selected from Na_2CO_3 , K_2CO_3 , Li_2CO_3 , CaCO_3 , NaOH , KOH , LiOH , or Ca(OH)_2 in the form of 0.1-90% aqueous solution

IC ICM C03B005-16

ICS C03C006-00; C03B003-00; C03B005-173

CC 57-1 (Ceramics)

IT Viscosity

(of alkalisilicate glass melts; procedure for decrease of foaming in glass-melting tubs)

IT 471-34-1, Calcium carbonate (CaCO_3), processes 497-19-8, Sodium carbonate (Na_2CO_3), processes 554-13-2, Lithium carbonate (Li_2CO_3) 584-08-7, Potassium carbonate (K_2CO_3) 1305-62-0, Calcium hydroxide (Ca(OH)_2), processes 1310-58-3, Potassium hydroxide (KOH), processes 1310-65-2, Lithium hydroxide (LiOH) 1310-73-2, Sodium hydroxide (NaOH), processes
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(anti-foaming agent; procedure for decrease of foaming in glass-melting tubs)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:334623 CAPLUS

DOCUMENT NUMBER: 138:340667

TITLE: Controlled-release of divalent cations for viscosity reduction and breaking of borate-crosslinked fracturing fluids

INVENTOR(S): Crews, James B.

PATENT ASSIGNEE(S): Baker Hughes Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 10 pp., Cont.-in-part of U.S. Ser. No. 690,547.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|-------------|
| US 2003083205 | A1 | 20030501 | US 2002-315430 | 20021210 |
| US 6642185 | B2 | 20031104 | | |
| AU 782936 | B2 | 20050908 | AU 2001-79345 | 20011010 |
| CA 2358837 | AA | 20020416 | CA 2001-2358837 | 20011015 |
| NO 2001005007 | A | 20020417 | NO 2001-5007 | 20011015 |
| | | | US 2000-690547 | A2 20001016 |

PRIORITY APPLN. INFO.:

ED Entered STN: 02 May 2003

AB Breaking of borate-crosslinked petroleum fracturing fluids is enhanced by inclusion of a divalent cation-releasing material, which releases the cations slowly over a period of time. The cations, upon release or liberation by suitable materials, complex with the hydroxide or carbonate pH buffers in the fluids, reduces the pH of the fracturing fluid, which results in a viscosity reduction (i.e., "breaking") of the (typically) polysaccharide in the fluid, or initiating the activity of the enzyme breaker. About 80% of the divalent cations are slowly released at up to 48 h, and $\leq 20\%$ of the cations are released in the first 10 min. Suitable material capable of releasing divalent cations include salts and complexes of Ca^{2+} , Mg^{2+} , Mn^{2+} , Zn^{2+} , Fe^{2+} , and Ti^{2+} .

IC ICM E21B001-00

INCL 507200000

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

IT Calcium-binding proteins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Well treatment fluids

(controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Petroleum recovery

(enhanced; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Enzymes, processes

RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
(gel breaking agents; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Metalloporphyrins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(iron, protoporphyrins, cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Proteins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(magnesium-binding, cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Porphyrins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(protoporphyrins, magnesium complexes, cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Proteins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(zinc-binding, cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT Metallothioneins

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(zinc-containing, cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT 9000-30-0, Guar gum

RL: TEM (Technical or engineered material use); USES (Uses)

(borate-crosslinked, BoraFRAQ, breaking of; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

IT 144-55-8, Sodium bicarbonate, uses 497-19-8, Sodium carbonate, uses

533-96-0, Sodium sesquicarbonate 584-08-7, Potassium carbonate

1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses

RL: NUU (Other use, unclassified); USES (Uses)

(buffers; controlled-release of divalent cations for **viscosity**

- reduction and breaking of borate-crosslinked fracturing fluids)**
- IT 62-54-4, Calcium acetate 137-08-6, Calcium D-pantothenate 142-72-3, Magnesium acetate 144-23-0, Magnesium citrate, dibasic 299-28-5, Calcium gluconate 557-34-6, Zinc acetate 4468-02-4, Zinc gluconate 5743-27-1, Calcium ascorbate 7446-19-7, Zinc sulfate monohydrate 7487-88-9, Magnesium sulfate, processes 7720-78-7, Ferrous sulfate 7778-18-9, Calcium sulfate 7779-88-6, Zinc nitrate 7785-87-7, Manganese sulfate (MnSO₄) 7786-30-3, Magnesium chloride, processes 8061-52-7, Calcium lignosulfonate 8061-54-9, Magnesium lignosulfonate 10043-52-4, Calcium chloride, processes 10124-37-5, Calcium nitrate 10377-60-3, Magnesium nitrate 15431-40-0, Magnesium ascorbate
- RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
- (cation release from, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)
- IT 9000-90-2, α -Amylase 9012-54-8, Cellulase 9025-56-3, Hemicellulase 9032-75-1, Pectinase
- RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
- (gel breaking agents; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)
- IT 14127-61-8, Calcium(2+), processes 15438-31-0, Ferrous ion, processes 15969-58-1, Titanium(2+), processes 16397-91-4, Manganese(2+), processes 22537-22-0, Magnesium(2+), processes 23713-49-7, Zinc(2+), processes
- RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
- (release of, in gel breaking; controlled-release of divalent cations for **viscosity reduction** and breaking of borate-crosslinked fracturing fluids)

L18 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:627927 CAPLUS

DOCUMENT NUMBER: 133:192442

TITLE: Membrane-filtered milk protein concentrate with reduced lactose and novel functionality

INVENTOR(S): Blazey, Neil D.; Knights, Ralph J.; Wu, Chao

PATENT ASSIGNEE(S): New Zealand Dairy Board, N. Z.

SOURCE: PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2000051440 | A1 | 20000908 | WO 1999-NZ26 | 19990301 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9932799 | A1 | 20000921 | AU 1999-32799 | 19990301 |

PRIORITY APPLN. INFO.: WO 1999-NZ26 A 19990301

ED Entered STN: 10 Sep 2000

AB A process for preparing a protein concentrate with reduced lactose, from milk

containing lactose was developed. The pH of milk was adjusted into the range of about 7.5-10.0 with alkali and heated to a temperature in the range of about 60-90 C. After cooling to a temperature in the range of about 5-55 C, the milk was subjected to membrane filtration to sep. a protein-enriched retentate from a lactose enriched permeate. Selection of the appropriate alkali, pH values, temps., acid, and membrane filter porosity results in improved yields of retentate proteins having selected comps. with improved utility, including a more palatable flavor, a broad range of solution viscosities, an increase in the solubility of the dried retentates in cold water to nearly 100%, and an increase in the calcium content of the membrane filtered retentate by about 50% compared to a similar retentate from standard milk. Appropriate selection of processing conditions can result in at least one filter permeate with a protein composition enriched in α -lactalbumin, a protein that is highly beneficial for human nutrition.

IC ICM A23C001-00
ICS A23C009-142; A23C009-18; A23J001-20

CC 17-8 (Food and Feed Chemistry)

IT Flavor
Food solubility
Food viscosity
Milk
Ultrafiltration
Whey

(membrane-filtered milk protein concentrate with reduced lactose and novel functionality)

IT 50-21-5, Lactic acid, biological studies 1305-62-0, Calcium hydroxide (Ca(OH)₂), biological studies 1305-78-8, Calcium oxide, biological studies 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide (Na(OH)); biological studies 7664-41-7, Ammonia, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(alkalinization with; membrane-filtered milk protein concentrate with

reduced lactose and novel functionality)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:593783 CAPLUS

DOCUMENT NUMBER: 105:193783

TITLE: Production of pumpable mixtures from highly viscous residues from coal processing

INVENTOR(S): Loeblich, Klaus; Gartner, Berthold; Weber, Dietrich; Richter, Claus Peter; Panovsky, Walter; Hornischer, Angelika; Sowka, Karl; Duerlich, Manfred; Slabik, Johannes; et al.

PATENT ASSIGNEE(S): Institut fuer Energetik, Ger. Dem. Rep.; Zentralstelle fuer Rationelle Energieanwendung

SOURCE: Ger. (East), 5 pp.

CODEN: GEXXA8

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| DD 232837 | A1 | 19860212 | DD 1984-271588 | 19841227 |
| PRIORITY APPLN. INFO.: | | | DD 1984-271588 | 19841227 |

ED Entered STN: 28 Nov 1986

AB Pumpable mixts. are produced from highly viscous coal-processing residues, especially tar/oil-solid-water mixts. from high-pressure coal gasification, by heating the mixture and mixing it with a warmed sodium or potassium liquor, especially NaOH or KOH 0.5-2 weight%, and addnl. water, followed by emulsification

for stabilizing the mixture Thus, a mixture containing tar/oil 40, solids 35, and

water 25 weight% was warmed to 85-90° and mixed with 20 weight% heated Na liquor 5%, followed by emulsification, giving a 50% reduction in viscosity. Following treatment, the mixture can be used further as an energy or mass source.

IC ICM B01F003-14

CC 48-11 (Unit Operations and Processes)

Section cross-reference(s): 51

ST coal processing residue treatment; gasification coal residue treatment; **viscosity redn** coal processing residue

IT Coal gasification

(emulsification of oil and tar residues from, for **viscosity reduction**)

IT Emulsification

(of oil/tar mix. by sodium hydroxide, for **viscosity reduction**)

IT Viscosity

(reduction of, for tar/oil mixts. from coal processing, by emulsification)

IT 1310-58-3, uses and miscellaneous 1310-73-2, uses and miscellaneous

RL: USES (Uses)

(emulsification of tar/oil mixts. from coal processing with, for **viscosity reduction**)

L18 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:471823 CAPLUS

DOCUMENT NUMBER: 103:71823

TITLE: Alkylene oxide adducts of aniline having **reduced viscosity**

INVENTOR(S): Korczak, Alexander; Levis, William W., Jr.

PATENT ASSIGNEE(S): BASF Wyandotte Corp. , USA

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 4517383 | A | 19850514 | US 1983-510441 | 19830705 |
| CA 1216863 | A1 | 19870120 | CA 1984-456967 | 19840620 |
| CA 1222528 | A1 | 19870602 | CA 1984-456966 | 19840620 |
| US 4590225 | A | 19860520 | US 1985-693577 | 19850122 |
| PRIORITY APPLN. INFO.: | | | US 1983-510441 | A 19830705 |
| | | | US 1983-510606 | A 19830705 |

ED Entered STN: 07 Sep 1985

AB Compds. PhNH(RO)x(R1O)yH (R and R1 = C2-4 alkylene, x = 0-50, y = 0-50, 1 < x + y < 50) which have low viscosities and are useful as surfactants and in polyurethane manufacture, are prepared by the reaction of ≥1 alkylene oxide with aniline in the presence of an alkali metal hydroxide. Thus, the reaction of 2 mol. propylene oxide with 1 mol. aniline at 150°

in the presence of 0.44 part KOH/part aniline gave PhNH(C₃H₆O)xH [97613-08-6] (mol. weight 915, tertiary amine content 0.09%) having viscosity 240 cP at 25°, compared with 176,000 cP for a product prepared similarly in the absence of KOH.

IC ICM C07C093-00
INCL 564443000
CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 46
IT 1310-58-3, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for alkoxylation of aniline)

L18 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:9037 CAPLUS

DOCUMENT NUMBER: 102:9037

TITLE: Reducing slurry viscosity of kaolinitic clays

INVENTOR(S): Ginn, Michael W.

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 8 pp. Cont.-in-part of U.S. Ser. No. 428,015, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 4477422 | A | 19841016 | US 1982-451339 | 19821220 |
| PRIORITY APPLN. INFO.: | | | US 1981-327703 | A1 19811204 |
| | | | US 1982-428015 | A2 19820930 |

ED Entered STN: 12 Jan 1985

AB The low-shear, slurry viscosity of a kaolinitic clay that is contaminated with ≥ 1 form of expanding clay is decreased by mixing the clay with a source of K⁺ and then heating the K-treated clay at $\geq 100^\circ$. Thus, a kaolin contaminated with degraded illite had a low-shear viscosity at 71% solids and pH 7 of 1600 cPs. When it was treated with KOH and rinsed to remove soluble salts the low-shear viscosity was 490 cPs.

IC C01B033-26; C01B033-02

INCL 423327000

CC 49-11 (Industrial Inorganic Chemicals)

Section cross-reference(s): 43

ST kaolin viscosity decrease; potassium reaction kaolin

IT Clays, uses and miscellaneous

Kaolin, uses and miscellaneous

RL: USES (Uses)

(viscosity decrease of slurry of, potassium cations in)

IT 298-14-6 1310-58-3, uses and miscellaneous 7778-80-5, uses and miscellaneous

RL: USES (Uses)

(viscosity decrease by, of kaolin)

L18 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:509703 CAPLUS

DOCUMENT NUMBER: 99:109703

TITLE: Reducing slurry viscosity of kaolinitic clays

PATENT ASSIGNEE(S): Nord Kaolin Co., USA

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------------|
| DE 3204326 | A1 | 19820902 | DE 1982-3204326 | 19820209 |
| FI 8100405 | A | 19820812 | FI 1981-405 | 19810211 |
| CA 1161071 | A1 | 19840124 | CA 1981-377262 | 19810511 |
| FI 8102864 | A | 19820812 | FI 1981-2864 | 19810914 |
| NO 8200309 | A | 19820812 | NO 1982-309 | 19820202 |
| GB 2092564 | A | 19820818 | GB 1982-3285 | 19820205 |
| DK 8200558 | A | 19820812 | DK 1982-558 | 19820210 |
| FR 2499549 | A1 | 19820813 | FR 1982-2190 | 19820210 |
| SE 8200820 | A | 19820812 | SE 1982-820 | 19820211 |
| | | | FI 1981-405 | A 19810211 |

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

AB The viscosity of portland cement mixts. and especially concrete is decreased and

the mixts. are plasticized by incorporating conventional additives and a lignosulfonate with purity $\geq 85\%$ and a 0.2-2.0-fold amount of conventional accelerator based on the lignosulfonate. The use of the high-purity lignosulfonates gives concrete with no irregular or uncontrolled delay of curing and hardening. Thus, rapid-hardening cement mixed with sand in a 1:3 ratio at 30° was treated with 0.5 Na₂CO₃ and 0.5% lignosulfonate with purity 100, 95, 91, and 80%. The flow behavior, i.e the increase of diameter of mortar, cones was 101, 103, 95, and 82 mm and the hardening time within which mortar flow decreased from 80 mm to 0 mm was 43 min, 37 min, 1 h 37 min, and 3 h 11 min, resp., compared to 33 mm and 4 h 13 min for a standard without additives.

IC C04B013-28; C04B007-35; C04B013-02; C04B015-00

CC 58-1 (Cement, Concrete, and Related Building Materials)

IT 1310-58-3, uses and miscellaneous 1310-65-2 1310-73-2, uses and miscellaneous

RL: USES (Uses)

(in cements, containing high-purity lignosulfonate plasticizer, for viscosity loss compensation)

L18 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:509275 CAPLUS

DOCUMENT NUMBER: 91:109275

TITLE: Reducing viscosity and refining of kaolins

PATENT ASSIGNEE(S): Huber, J. M., Corp., USA

SOURCE: Fr. Demande, 38 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------------|
| FR 2388775 | A1 | 19781124 | FR 1977-12976 | 19770429 |
| | | | FR 1977-12976 | A 19770429 |

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

AB The viscosity of high-viscosity kaolin is reduced for use as pigment in paper coatings by treatment of aqueous kaolin suspensions with [Al(OH)_mX_{3-m}]_n [X = Cl-, (SO₄²⁻)_{0.5}, or NO₃-, n = 6-24, m = 1.0-2.75], which is prepared in situ by reaction of inorg. bases with Al salts. Thus, necessary quantities of AlCl₃·6H₂O and NaOH were added to a 20% aqueous

SOURCE: PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| WO 8301948 | A1 | 19830609 | WO 1982-US1682 | 19821202 |
| W: AU, DE, GB | | | | |
| AU 8310457 | A1 | 19830617 | AU 1983-10457 | 19821202 |
| GB 2121395 | A1 | 19831221 | GB 1983-19802 | 19821202 |
| GB 2121395 | B2 | 19850605 | | |
| DE 3249234 | T | 19840209 | DE 1982-3249234 | 19821202 |
| ZA 8208963 | A | 19830928 | ZA 1982-8963 | 19821206 |
| PRIORITY APPLN. INFO.: | | | US 1981-327703 | A 19811204 |
| | | | WO 1982-US1682 | A 19821202 |

ED Entered STN: 12 May 1984

AB The low-shear slurry viscosity of a kaolinitic clay, contaminated with expanding clay, especially degraded illite, is reduced by mixing the clay with

a source of K⁺, e.g., KHCO₃, and heating the K-treated clay to 120-190°. Thus, a kaolin, contaminated with degraded illite and having a shear velocity of 4000 cP at 71% solids and pH 7, was prepared as a slurry with 600 g kaolin and 1400 mL H₂O. Na silicate (4.5 lb/ton) was used as dispersant. The slurry was treated with 30 mL of a 10% solution of KHCO₃ and agitated for 24 h at pH 9.8, flocculated with 5 mL of 50% alum solution, filtered, and dried at 200° for 2 h. The dried clay was mixed with H₂O and Na hexametaphosphate to 71% solids and adjusted to pH 7. The low-shear viscosity was 800 cP, an 80% decrease.

IC C04B033-02; C09C001-42

CC 57-5 (Ceramics)

ST kaolin slurry **viscosity decrease**; illite contamination
 kaolin **viscosity**; potassium salt kaolin slurry **viscosity**

IT Kaolin, properties

RL: PRP (Properties)

(viscosity of slurries of, decrease by treatment with potassium salts)

IT 298-14-6 584-08-7 1310-58-3, properties 7778-49-6

7778-80-5, properties

RL: USES (Uses)

(in kaolin slurries containing illite, for decrease of viscosity)

IT 12173-60-3

RL: USES (Uses)

(kaolin slurries containing, viscosity of, decrease by treatment with potassium salts)

L18 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:58967 CAPLUS

DOCUMENT NUMBER: 98:58967

TITLE: Reducing viscosity or liquifying
 portland cement mixtures, specifically concrete

INVENTOR(S): Forss, Bengt; Ahonen, Heikki

PATENT ASSIGNEE(S): Flowcon Oy, Finland

SOURCE: Ger. Offen., 20 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

suspension of kaolin of initial Brookfield viscosity 725 cP and 70% solids to form in situ 0.75% [Al(OH)2.25Cl0.75]6-12 (I) based on kaolin, followed by mixing 15 min at room temperature, filtering, washing to 40% solids, drying in an acid atmospheric at 93-9° to 70% dry solids, and mixing 15 min at a moderate shear of 1.5 kW to give kaolin pigments with Brookfield viscosity 184 cP and Elrepho whiteness 84.3%. A 58% solids coating composition containing

I-treated kaolin 100, starch 14, and Dow 620 latex 2 parts had Brookfield viscosity 7400 cP and provided, on paper, a coating (7.5 g/m2) with opacity 88.27% before and 87.13% after calendering and whiteness index 46.4, compared with 87.57%, 86.53%, and 44.0, resp., for a control coating.

IC C04B033-13; D21H003-78

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 42

ST aluminum salt treated kaolin pigment; kaolin pigment paper;
viscosity redn kaolin pigment

IT Kaolin, uses and miscellaneous

RL: RCT (Reactant); RACT (Reactant or reagent)
(viscosity reduction of, by basic aluminum polymeric salts, for pigments for paper coatings)

IT 1310-58-3, uses and miscellaneous

RL: USES (Uses)
(kaolin treated by aluminum chloride and, for reduction of viscosity for pigments for paper coating)

IT 1310-73-2, uses and miscellaneous 1336-21-6

RL: USES (Uses)
(kaolin treated by aluminum salts and, for reduction of viscosity for pigments for paper coatings)

IT 7446-70-0, uses and miscellaneous 10043-01-3 13473-90-0

RL: USES (Uses)
(kaolin treated by inorg. base and, for reduction of viscosity for pigments for paper coatings)

L18 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1976:408062 CAPLUS

DOCUMENT NUMBER: 85:8062

TITLE: Pipeline transportation of viscous hydrocarbons

INVENTOR(S): Flournoy, Kenneth H.; Cardenas, Ricardo L.; Carlin, Joseph T.

PATENT ASSIGNEE(S): Texaco Inc., USA

SOURCE: U.S., 3 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|------------|
| US 3943954 | A | 19760316 | US 1974-464886 | 19740429 |
| CA 1022214 | A1 | 19771206 | CA 1975-222034 | 19750313 |
| | | | US 1974-464886 | A 19740429 |

PRIORITY APPLN. INFO.:

ED Entered STN: 12 May 1984

AB The transport of viscous crude oil is facilitated by adding to a pipeline or well-bore a solution containing an anionic surfactant or soap, a guanidine salt, and, optionally, an alkalinity agent and/or a nonionic surfactant, which forms a low-viscosity salt-tolerant oil-in-water emulsion. Thus, Na dodecyl sulfate [151-21-3] 0.7, guanidine hydrochloride [50-01-1] 0.10, NaOH 0.10, and polyethylene glycol monodecyl ether [26183-52-8] 0.12% were

mixed with H2O having salinity 1.89% at 25°, and the solution was added (20 volume%) to a pipeline together with sufficient Richfield crude oil to give an oil-in-water emulsion. The emulsion-containing crude was more easily transported through the pipeline than the same volume of pure crude under similar conditions.

IC F17D; B01F

INCL 137013000

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

ST petroleum crude pipeline transport; **viscosity redn** crude oil; surfactant petroleum **viscosity redn**; guanidine petroleum **viscosity redn**; polyethylene glycol decyl ether; dodecyl sulfate anionic surfactant; sodium hydroxide **viscosity redn**

IT Surfactants

(anionic and nonionic, for **reduced viscosity** of petroleum in pipelines)

IT Petroleum

RL: USES (Uses)

(**viscosity-reducing** agents for, in pipelines)

IT 50-01-1 143-19-1 151-21-3, uses and miscellaneous 1184-68-5

1310-73-2, uses and miscellaneous 26183-52-8

RL: USES (Uses)

(**viscosity reducing** agents, for petroleum in pipelines)

IT 1310-58-3, uses and miscellaneous

RL: USES (Uses)

(**viscosity-reducing** agents, for petroleum in pipelines)

L18 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1965:8505 CAPLUS

DOCUMENT NUMBER: 62:8505

ORIGINAL REFERENCE NO.: 62:1506d

TITLE: Minimizing boron oxide deposits in the combustion of high-energy fuel

INVENTOR(S): Schechter, William H.; Eads, David K.

PATENT ASSIGNEE(S): Callery Chemical Co.

SOURCE: 4 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| US 3157989 | | 19641124 | US 1958-714427 | 19580210 |

ED Entered STN: 22 Apr 2001

AB B-containing fuel compns., e.g. B hydride, lower-alkyl boranes, or B dispersed in a hydrocarbon, are described that include an additive to reduce the viscosity and easily remove B2O3 formed by combustion of the fuel. Five mole % of LiOH, KOH, and NaOH was equally effective in reducing the viscosity of B2O3 at 650° and 950°.

INCL 060035400

CC 28 (Propellants and Explosives)

IT Fuels

(boron-containing, with alkali additives for **decreasing viscosity** of B2O3 produced in combustion)

IT 1310-58-3, Potassium hydroxide 1310-65-2, Lithium hydroxide

1310-73-2, Sodium hydroxide

(as fuel (B-containing) additive)

L18 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1964:448283 CAPLUS

DOCUMENT NUMBER: 61:48283

ORIGINAL REFERENCE NO.: 61:8432b-c

TITLE: Specific influence of strontium cations on properties of solutions of poly(methacrylic acid)

AUTHOR(S): Wojtczak, Zbigniew

CORPORATE SOURCE: Copernicus Univ., Torun, Pol.

SOURCE: Journal of Polymer Science (1964), 2(Pt. B;7), 661-3

CODEN: JPSCAU; ISSN: 0022-3832

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

AB The variation of sp. reduced viscosity of solns. of the title polymer (I) with degree of neutralization by Ba(OH)₂, Ca(OH)₂, or Sr(OH)₂ revealed a specific counterion effect with Sr--. In contrast, the variation of sp. reduced viscosity of solns. of I with degree of neutralization by LiOH, NaOH, and KOH was proportional to counterion size. The specific effect of Sr-- ions on solns. of I was observed with samples of I having mol. wts. of 33,000, 195,000, and 826,000.

CC 45 (Synthetic High Polymers)

IT Ions

(counter-, in methacrylic acid polymer aqueous solns., specific reduced viscosity in relation to)

IT 7440-24-6, Strontium

(as counterion in methacrylic acid polymer aqueous solution, reduced viscosity and)

IT 17194-00-2, Barium hydroxide 18480-07-4, Strontium hydroxide

(methacrylic acid polymer aqueous solns. neutralized by, sp. reduced viscosity of)

IT 1305-62-0, Calcium hydroxide 1310-58-3, Potassium hydroxide

1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide (methacrylic acid polymer aqueous solns. neutralized by, specific reduced viscosity of)

IT 25087-26-7, Methacrylic acid, homopolymer

(viscosity (specific reduced) of aqueous solns. of, in presence of alkali metal or alkaline earth metal counterions)

Journal

L23 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1223676 CAPLUS

DOCUMENT NUMBER: 143:480141

TITLE: Degradable additive for viscoelastic surfactant based fluid systems

INVENTOR(S): Sullivan, Philip F.; Brown, J. Ernest; Lee, Jesse C.; Salamat, Golchehreh

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 707,022,.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

| | | | | |
|---------------|----|----------|-----------------|----------|
| US 2005252659 | A1 | 20051117 | US 2005-159023 | 20050622 |
| US 2004094300 | A1 | 20040520 | US 2003-707022 | 20031114 |
| US 7066260 | B2 | 20060627 | | |
| WO 2006003637 | A1 | 20060112 | WO 2005-IB52202 | 20050701 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

| | | | | |
|------------------------|----|----------|-----------------|-------------|
| US 2006157248 | A1 | 20060720 | US 2005-316021 | 20051221 |
| PRIORITY APPLN. INFO.: | | | US 2003-707022 | A2 20031114 |
| | | | US 2004-584995P | P 20040702 |
| | | | US 2002-227690 | A2 20020826 |
| | | | US 2005-159023 | A 20050622 |

ED Entered STN: 18 Nov 2005

AB A method is given for treating a subterranean formation penetrated by a wellbore with a viscosified fluid. The fluid contains a solid hydrolysable polyacid that upon dissoln. and hydrolysis releases an acid that is a breaker for the viscosifying system. Suitable solid hydrolysable polyacids include polylactic acid and polyglycolic acid. The fluid also contains a pH control agent, present in an amount sufficient to neutralize any acid present in the solid hydrolysable polyacid before the injection and to neutralize any acid generated by the solid hydrolysable polyacid during the injection, so that the acid breaker is not available to break the fluid during the injection. In one embodiment the viscosifier is a viscoelastic surfactant fluid system and the solid hydrolysable polyacid is of a size selected to be a fluid loss additive, for example in fracturing or gravel packing. In another embodiment, the solid hydrolysable polyacid is used in particles sufficiently small that they enter the pores of the formation. In either case, the viscosifier is broken after the solid releases more acid than can be neutralized by the pH control agent.

IC ICM E21B043-267

INCL 166280100

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 46

IT Acids, uses

RL: FMU (Formation, unclassified); MOA (Modifier or additive use); FORM (Formation, nonpreparative); USES (Uses)
(generated in-situ, to reduce viscosity; degradable additive for viscoelastic surfactant based fluid systems)

IT Alkali metal hydroxides

Alkali metal oxides

Alkaline earth hydroxides

Alkaline earth oxides

Amines, uses

RL: NUU (Other use, unclassified); USES (Uses)

(pH control agent; degradable additive for viscoelastic surfactant based fluid systems)

L23 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:315863 CAPLUS

DOCUMENT NUMBER: 142:340557

TITLE: Preparation method of suspension type ground improving material
 INVENTOR(S): Kuroki, Hideki; Yoda, Yukihiro; Koike, Hiroyuki
 PATENT ASSIGNEE(S): Mitsui Kagaku Sanshi Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2005097413 | A2 | 20050414 | JP 2003-332621 | 20030925 |
| PRIORITY APPLN. INFO.: | | | JP 2003-332621 | 20030925 |

ED Entered STN: 14 Apr 2005

AB A suspension type ground improving material comprises water-granulated fine slag particles 100-500, alkali stimulant 10-100, dispersant 0.1-20, consolidation improver 0-100 kg/m3 and balance water and it is prepared by kneading water-granulated fine slag particles (optionally and alkali stimulant) in the presence of water at an amount of 0.3-1.0 times the sum of the slag and optionally the alkali stimulant and dispersant and adding the remaining components. The ground improving material is superior in permeability to ground, has low and stable viscosity until gelation and high consolidation strength after gelled.

IC ICM C09K017-42

ICS C09K017-02; C09K017-18; E02D003-12; C09K103-00

CC 58-5 (Cement, Concrete, and Related Building Materials)

IT Concrete modifiers

(water-reducing agents; preparation method of suspension type ground improving material having high permeability to soil and low and stable viscosity for high consolidation strength from slag, alkali stimulant and dispersant)

IT 497-19-8, Sodium carbonate, uses 1305-62-0, Calcium hydroxide, uses 7757-82-6, Sodium sulfate, uses

RL: TEM (Technical or engineered material use); **USES (Uses)**

(preparation method of suspension type ground improving material having high permeability to soil and low and stable viscosity for high consolidation strength from slag, alkali stimulant and dispersant)

L23 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:442680 CAPLUS

DOCUMENT NUMBER: 141:15942

TITLE: Conductive electrolyte system with viscosity reducing co-solvents for electrolytic capacitor for defibrillator

INVENTOR(S): Feger, Christopher

PATENT ASSIGNEE(S): Pacesetter, Inc., USA

SOURCE: U.S., 11 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 6744619 | B1 | 20040601 | US 2002-319253 | 20021212 |
| PRIORITY APPLN. INFO.: | | | US 2002-319253 | 20021212 |

ED Entered STN: 01 Jun 2004

- AB The present invention is directed to a conductive electrolyte for use in high voltage electrolytic capacitors and to an electrolytic capacitor impregnated with the electrolyte of the present invention for use in an implantable cardioverter defibrillator (ICD). The electrolyte according to the present invention is composed of a two solvent mixture of ethylene glycol and a polar organic cosolvent. Dissolved in this mixture is a combination of: a high dielec. cosolvent, a long chain monocarboxylic acid and an aliphatic dicarboxylic acid of C chain length from eight to thirteen (C8 to C13). The solution is then neutralized with an amine. A cathode depolarizer, or degassing agent may be added to reduce the amount of gas produced during capacitor life. Hypophosphorous acid may be added to enhance the life characteristics of the electrolyte. The H2O content may be adjusted with deionized H2O to achieve a Karl Fischer titration (water content) measurement of .apprx.1.0% to .apprx.8.0% to achieve proper age characteristics.
- IC ICM H01G009-42
- INCL 361506000; 361504000; 204129100; 029025030
- CC 76-10 (Electric Phenomena)
Section cross-reference(s): 63
- IT Degassing
(agents; conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT Electrolytic capacitors
Electrolytic solutions
(conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT Amines, uses
Carboxylic acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT Medical goods
(defibrillators; conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT Carboxylic acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(dicarboxylic; conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT Solvents
(organic; conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)
- IT 57-11-4, Stearic acid, uses 64-17-5, Ethyl alcohol, uses 67-63-0, Isopropyl alcohol, uses 67-68-5, Dimethyl sulfoxide, uses 71-23-8, Propyl alcohol, uses 71-36-3, Butanol, uses 75-05-8, Acetonitrile, uses 75-50-3, Trimethylamine, uses 91-23-6, o-Nitroanisole 100-17-4 102-71-6, Triethanolamine, uses 107-21-1, Ethylene glycol, uses 108-32-7, Propylene carbonate 109-86-4, 2-Methoxyethanol 109-89-7, Diethylamine, uses 110-80-5, 2-Ethoxyethanol 111-20-6, Sebacic acid, uses 111-42-2, Diethanolamine, uses 111-76-2, 2-Butoxyethanol 121-44-8, Triethylamine, uses 123-99-9, Azelaic Acid, uses 124-40-3, Dimethylamine, uses 141-43-5, Ethanolamine, uses 143-07-7, Lauric Acid, uses 505-48-6, Suberic acid 505-52-2, Brassylic acid 693-23-2, Dodecanedioic acid 1321-12-6, Nitrotoluene 1336-21-6, Ammonium Hydroxide 1852-04-6, Undecanedioic acid 6303-21-5, Hypophosphorous acid 7087-68-5, Diisopropylethylamine 7664-41-7, Ammonia, uses 10043-35-3, Boric Acid, uses 25154-55-6, Nitrophenol 36812-06-3, Nitroacetophenone 99714-66-6, Nitrobenzyl alcohol
RL: TEM (Technical or engineered material use); USES (Uses)
(conductive electrolyte system with **viscosity**
reducing solvents for electrolytic capacitor for defibrillator)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:58509 CAPLUS
DOCUMENT NUMBER: 134:116918
TITLE: Hot-melt adhesive composition with **reduced** melt **viscosity** and improved workability
INVENTOR(S): Kuwahara, Mitsuru
PATENT ASSIGNEE(S): Japan U-Pica K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| JP 2001019931 | A2 | 20010123 | JP 1999-191830 | 19990706 |
| PRIORITY APPLN. INFO.: | | | JP 1999-191830 | 19990706 |
| ED Entered STN: 24 Jan 2001 | | | | |
| AB Title adhesive is obtained by thermal-reversible crosslinking of a carboxy-containing polyester or polyester urethane resin, which does not contain units having reactive unsatd. bond, with a basic metal compound Thus. | | | | |
| IC ICM C09J167-02 | | | | |
| ICS C09J175-06; C08G018-76; C08G018-83; C08G063-91 | | | | |
| CC 38-3 (Plastics Fabrication and Uses) | | | | |
| IT Polyesters, uses | | | | |
| RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) | | | | |
| (hot-melt adhesive composition with reduced melt viscosity and improved workability) | | | | |
| IT Adhesives | | | | |
| (hot-melt; hot-melt adhesive composition with reduced melt viscosity and improved workability) | | | | |
| IT Polyurethanes, uses | | | | |
| RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) | | | | |
| (polyester-; hot-melt adhesive composition with reduced melt viscosity and improved workability) | | | | |
| IT 321434-25-7P 321434-26-8P 321434-27-9P 321434-28-0P 321434-29-1P | | | | |
| RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) | | | | |
| (hot-melt adhesive composition with reduced melt viscosity and improved workability) | | | | |
| IT 1305-62-0, Calcium hydroxide, reactions 1305-78-8, Calcium oxide, reactions 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, reactions | | | | |
| RL: RCT (Reactant); RACT (Reactant or reagent) | | | | |
| (hot-melt adhesive composition with reduced melt viscosity and improved workability) | | | | |

L23 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:304302 CAPLUS
DOCUMENT NUMBER: 130:314229
TITLE: Preparation of **viscosity** reducers for petroleum recovery
INVENTOR(S): Wang, Guorui; Que, Junren

PATENT ASSIGNEE(S): Oilfield Technology Institute, Xinjiang Petroleum
Administration, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| CN 1115778 | A | 19960131 | CN 1994-108954 | 19940728 |
| PRIORITY APPLN. INFO.: | | | CN 1994-108954 | 19940728 |

ED Entered STN: 19 May 1999

AB The mol. formula of the viscosity reducer is $(XCH_2X)m_3CH_2YCH_2Z$, where $m_3 = 3-10$. The mol. formula of X is $(O(C_2H_4O)n'-C_6H_5-o-CH_2-C_6H_5-O(C_2H_4O)m')n_1$, where, $n_1 = 1-6$, $n' = 1-15$, and $m' = 1-15$; the mol. formula of Y is $CH_3(CH_2)_{16}CH_2N((C_2H_4O)n_2)(C_2H_4O)m_2$, where, $n_2 = 1-15$, $m_2 = 1-15$; and the mol. formula of Z is $O(:)PY_3$. The viscosity reducer is prepared by (1) mixing phenol, nonylphenol, and 30 mol epoxyethane in an autoclave (phenol:nonylphenol 1:1 mol ratio), and reacting at 130-160° and 0.3-0.5 MPa for 6 h in the presence of alkali catalyst to obtain X, (2) mixing alkylamine, epoxyethane, and 0.2 weight% of total raw material of NH_4OH in an autoclave, and reacting at 130-160° and 0.3-0.5 MPa for 5 h to obtain Y, (3) allowing Y to react with H_3PO_4 at a mol ratio of 1:1.2 at 50-55° for 6 h to obtain Z, and (4) mixing dried X, Y, and Z at a mol ratio of 1:1:1 in an autoclave (pressurizing with N_2), adding 0.1 weight% paraformaldehyde and 0.1 weight% NaOH, reacting at $200 \pm 5^\circ$ and 1-40 MPa for 4-6 h to obtain the viscosity reducer. The alkali catalyst is NaOH. Thiourea and isoascorbic acid may replace epoxyethane and NH_4OH , resp., in preparing Y.

IC ICM C09K007-00

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

ST viscosity reducer prepn

IT Petroleum recovery
(preparation of viscosity reducers for petroleum recovery)

IT 89-65-6, Isoascorbic acid 1310-73-2, Sodium hydroxide, uses 1336-21-6, Ammonium hydroxide
RL: CAT (Catalyst use); USES (Uses)
(in preparation of viscosity reducers for petroleum recovery)

IT 26635-92-7P, Ethoxylated stearylamine 223478-51-1P 223479-77-4P
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of viscosity reducers for petroleum recovery)

IT 50-00-0, Formaldehyde, reactions 62-56-6, Thiourea, reactions 75-21-8, Oxirane, reactions 104-40-5 108-95-2, Phenol, reactions 7664-38-2, Phosphoric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of viscosity reducers for petroleum recovery)

IT 223478-51-1DP, reaction products with ethoxylated stearylamine and its phosphate
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(preparation of viscosity reducers for petroleum recovery)

L23 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:21565 CAPLUS
 DOCUMENT NUMBER: 130:82520
 TITLE: Low-pressure molding compositions with stable viscosity during aging and molding thereof
 INVENTOR(S): Seats, Robert Lawrence; Atkins, Kenneth Earl; Reid, Carroll Glenn
 PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corporation, USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 5853645 | A | 19981229 | US 1996-596722 | 19960205 |
| PRIORITY APPLN. INFO.: | | | US 1996-596722 | 19960205 |

ED Entered STN: 12 Jan 1999

AB Low-pressure molding compns., particularly SMCs, comprise an unsatd. thermosetting resin, an olefinically unsatd. monomer, a viscosity-reducing additive such as aliphatic monocarboxylic acids, amino acids, amido acids, phosphate esters, or polyalkylene oxides, a thermoplastic additive and a thickener comprising one or more alkaline earth metal (hydr)oxides to give the molding compns. viscosities <25 MMcP after aging for 1-4 days or more. Thus, a molding composition comprising an unsatd. polyester MR 13006 51.8, Neulon T Plus 33, styrene 5, divinylbenzene 3.9, Byk W 995 viscosity reducer 3.3, 5% solution of p-benzoquinone in diallyl phthalate 0.7, tert-Bu perbenzoate 1.8, Hamposyl O 3, zinc stearate 1, CalWhite II 210, and a 28% dispersion of 3.75/1.0 magnesium hydroxide/calcium hydroxide blend in a styrene/polystyrene carrier solution 16 parts, gave viscosities 40 McP (3 min), 160 McP (15 min), 7.6 MMcP (1 day), 7.4 MMcP (2 day), 9.2 MMcP (4 day), and 8.8 MMcP (5 day), compared to 56, 304, 30.8, 30.8, and 35.7, resp., for the same composition using 3 parts of zinc stearate instead of Hamposyl O.

IC ICM C08J005-00

INCL 264331150

CC 38-2 (Plastics Fabrication and Uses)

ST viscosity reducer stable unsatd thermosetting molding; alk earth metal oxide SMC molding; thickener alk earth metal hydroxide molding; Hamposyl viscosity reducer polyester molding; magnesium hydroxide calcium hydroxide thickener polyester

IT Carboxylic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (aliphatic, viscosity-reducing agent; low-pressure molding compns. with stable viscosity during aging and molding thereof)

IT Alkaline earth hydroxides

Alkaline earth oxides

RL: MOA (Modifier or additive use); USES (Uses)
 (thickener; low-pressure molding compns. with stable viscosity during aging and molding thereof)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (viscosity-reducing agent; low-pressure SMC molding compns. with stabilized viscosities during aging and molding thereof)

IT Amino acids, uses

RL: MOA (Modifier or additive use); USES (Uses)
(viscosity-reducing agent; low-pressure molding
comps. with stable viscosity during aging and molding
thereof)

IT 1305-62-0; Calcium hydroxide, uses 1305-78-8, Calcium oxide,
uses 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses
1314-13-2, Zinc oxide, uses

RL: MOA (Modifier or additive use); USES (Uses)
(thickener; low-pressure molding comps. with stable viscosity during
aging and molding thereof)

IT 110-25-8, Hamposyl O 7664-38-2D, Phosphoric acid, esters, uses

RL: MOA (Modifier or additive use); USES (Uses)
(viscosity-reducing agent; low-pressure molding
comps. with stable viscosity during aging and molding
thereof)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:884397 CAPLUS

DOCUMENT NUMBER: 124:10217

TITLE: Normal temperature-curing compositions with low
viscosity

INVENTOR(S): Goto, Yoshikazu

PATENT ASSIGNEE(S): Sanyo Chemical Ind Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 07179744 | A2 | 19950718 | JP 1993-346281 | 19931222 |
| PRIORITY APPLN. INFO.: | | | JP 1993-346281 | 19931222 |

ED Entered STN: 28 Oct 1995

AB Title comps., which cure to show low stress and high extensibility,
comprise hydrolyzable silyl-modified products of (meth)allyl-terminated
polyoxyalkylene ethers [number-average mol. weight (Mn) per a terminal
(meth)allyl
group ≥ 3000 ; weight-average mol. weight (Mw)/Mn ≤ 2.0]. Thus, 1000
parts ethylene oxide-propylene oxide (I) copolymer initiated by
dipropylene glycol-I adduct was treated by 30 parts allyl chloride then
1000 parts the resulted polymer was treated with 60 parts Me(MeO)₂SiH in
the presence of H₂PtCl₆ to give the hydrolyzable polymer, which was mixed
with dibutyltin dilaurate and ZnO and cured at room temperature for 7 days to
give a test piece showing tensile stress 2.6 kg/cm² and maximum elongation at
breakage 680%.

IC ICM C08L071-02

ICS C08G065-32

CC 37-6 (Plastics Manufacture and Processing)

ST ambient temp curing polyoxyalkylene ether; viscosity
redn polyoxyalkylene ether compn; stress redn cured
polyoxyalkylene ether; extensibility increase cured polyoxyalkylene ether;
hydrolyzable silyl termination polyoxyalkylene ether; ethylene oxide
polymer silyl termination; propylene oxide polymer silyl termination

IT 21351-79-1, Cesium hydroxide

RL: CAT (Catalyst use); USES (Uses)

(polymerization catalyst for alkylene oxides in preparation of
silyl-terminated

polyoxyalkylene ethers)

L23 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:432486 CAPLUS
DOCUMENT NUMBER: 115:32486
TITLE: Process for producing an overbased sulfonate
INVENTOR(S): Papke, Brian L.; Bartley, Leonard S., Jr.
PATENT ASSIGNEE(S): Texaco Inc., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 5011618 | A | 19910430 | US 1989-402283 | 19890905 |
| PRIORITY APPLN. INFO.: | | | US 1989-402283 | 19890905 |

ED Entered STN: 27 Jul 1991

AB In a process for preparing an overbased oil-soluble Ca sulfonate (TBM 400-450), a Ca base/Ca sulfonate mixture is mixed, stirred, reacted with CO₂, and filtered to produce the sulfonate product. The improvement comprises stirring the Ca base/Ca sulfonate mixture at variable tip speeds over a sufficient length of time, where the products filterability is enhanced and viscosity reduced.

IC ICM C10M135-10

INCL 252033000

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

IT Sulfonic acids, compounds

RL: PREP (Preparation)

(calcium salts, overbased, production of, with variable mixing speeds, for enhanced filterability and reduced viscosity)

IT 1305-62-0, Calcium hydroxide, uses and miscellaneous 1305-78-8, Calcium oxide, uses and miscellaneous

RL: USES (Uses)

(in preparation of calcium sulfonates, for enhanced filterability and reduced viscosity, with variable mixing speeds)

L23 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:120202 CAPLUS
DOCUMENT NUMBER: 110:120202
TITLE: Cement admixtures
INVENTOR(S): Watanabe, Yoshiharu; Moriyama, Hitoshi; Shimizu, Hisayuki; Ito, Mineo
PATENT ASSIGNEE(S): Denki Kagaku Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| JP 63225564 | A2 | 19880920 | JP 1987-56423 | 19870313 |
| JP 07053597 | B4 | 19950607 | | |
| JP 08301640 | A2 | 19961119 | JP 1996-139812 | 19960603 |
| JP 2764030 | B2 | 19980611 | | |
| PRIORITY APPLN. INFO.: | | | JP 1987-56423 | A3 19870313 |

ED Entered STN: 03 Apr 1989

AB The cement admixts. for increasing viscosity and preventing initial drying cracking comprise a high-performance water-reducing agent, ≥ 1 of bentonite, phlogopite, graphite, talc, BN, sepiolite, active C, carboric acid, diatomaceous earth, perlite, and palygorskite, and, optionally, inorg. salt(s). Thus, a concrete mixture containing cement 450, water 180, sand 796, and gravel 984 kg/m³ was mixed with 0.25 weight% Selflow 110 P and 2 weight% bentonite. The resulting concrete mixture had slump 9.8 cm and penetrability 1.8. When packed into a wooden box and kept at 30° and 60% relative humidity for 5 h no cracking was observed.

IC ICM C04B024-22
ICS C04B024-30

CC 58-2 (Cement, Concrete, and Related Building Materials)

IT Cement
Concrete
(admixts. for, containing water-reducing agent and bentonite, for increased viscosity and initial dry cracking prevention)

IT 144-55-8, Sodium bicarbonate, uses and miscellaneous 333-20-0, Potassium thiocyanate 497-19-8, Sodium carbonate, uses and miscellaneous 554-13-2, Lithium carbonate 584-08-7, Potassium carbonate 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, uses and miscellaneous 1312-76-1, Potassium silicate 1344-09-8, Sodium silicate 7447-40-7, Potassium chloride, uses and miscellaneous 7487-88-9, Magnesium sulfate, uses and miscellaneous 7631-90-5, Sodium bisulfite 7632-05-5, Sodium phosphate 7646-93-7, Potassium bisulfate 7772-98-7, Sodium thiosulfate 7778-18-9, Calcium sulfate 7782-42-5, Graphite, uses and miscellaneous 10024-42-7, Aluminum sodium sulfate 10043-11-5, Boron nitride, uses and miscellaneous 10257-55-3, Calcium sulfite 10377-48-7, Lithium sulfate 11137-59-0, Potassium aluminate 11138-49-1, Aluminum sodium oxide 12174-11-7, Palygorskite ([Mg(Al_{0.5}-1Fe_{0.5})]Si₄(OH)O₁₀.4H₂O) 12627-14-4, Lithium silicate (unspecified) 12698-75-8, Melment F-10 12712-38-8, Potassium borate 13568-33-7, Lithium nitrite 13780-06-8, Calcium nitrite 14807-96-6, Talc, uses and miscellaneous 15007-61-1 36290-04-7, Mighty 150 61076-94-6, Phlogopite 63800-37-3, Sepiolite 69772-37-8, Melment F-20 91728-18-6, Selflow 110P 96081-44-6, Denka FT 500 101380-19-2, Polfine 510N 119467-20-8, Sanflo PSR 120 119467-21-9, Selflow CA 155P

RL: MOA (Modifier or additive use); USES (Uses)
(cement admixts. containing, for increased viscosity and initial dry cracking prevention)

L23 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:552929 CAPLUS

DOCUMENT NUMBER: 109:152929

TITLE: Hydrocarbon-based drilling fluid

INVENTOR(S): Mukhin, L. K.; Belov, P. S.; Efimov, N. N.; Nizova, S. A.; Dudykina, N. V.; Golubovskaya, L. P.; Zavorotnyi, V. L.

PATENT ASSIGNEE(S): Moscow Institute of the Petrochemical and Gas Industry, USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1988, (25), 116.
CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

SU 1407945 A1 19880707 SU 1986-4118536 19860704
 PRIORITY APPLN. INFO.: SU 1986-4118536 19860704
 ED Entered STN: 28 Oct 1988
 AB The drilling fluid with improved suspension stability, reduced viscosity (in the internal 220-260°), and resistance to H2S contains oxidized petrolatum 1.0-2.0, Ca(OH)2 2.5-3.0, FeCl3 3.0-3.5, CaCl2 9.5-11.0, water 26.5-34.0 CaCO3 14.0-18.7, finely dispersed Fe oxides 2.0-5.0, pyrocatechol 0.01-0.20 weight%, and the balance diesel fuel.
 IC ICM C09K007-06
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)
 IT Fuels, diesel
 Petrolatum
 RL: USES (Uses)
 (drilling fluid containing, for improved suspension stability and reduced viscosity)
 IT 120-80-9, Pyrocatechol, uses and miscellaneous 471-34-1, Calcium carbonate, uses and miscellaneous 1305-62-0, Calcium hydroxide, uses and miscellaneous 1332-37-2, Iron oxide (unspecified), uses and miscellaneous 7705-08-0, Iron chloride, uses and miscellaneous 10043-52-4, Calcium chloride, uses and miscellaneous
 RL: USES (Uses)
 (drilling fluid containing, for improved suspension stability and reduced viscosity, preparation of)

L23 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1987:37624 CAPLUS
 DOCUMENT NUMBER: 106:37624
 TITLE: Preparing concrete mixtures and a liquid admixture for this process
 INVENTOR(S): Bell, David A.; Grenley, Dallas G.
 PATENT ASSIGNEE(S): Dow Chemical Co., USA
 SOURCE: Eur. Pat. Appl., 28 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------|------|----------|-----------------|------------|
| EP 200471 | A2 | 19861105 | EP 1986-303071 | 19860423 |
| EP 200471 | A3 | 19880210 | | |
| R: BE, CH, DE, FR, GB, IT, LI, NL, SE | | | | |
| AU 8655929 | A1 | 19861030 | AU 1986-55929 | 19860410 |
| NO 8601593 | A | 19861027 | NO 1986-1593 | 19860423 |
| BR 8601801 | A | 19861223 | BR 1986-1801 | 19860423 |
| DK 8601893 | A | 19861025 | DK 1986-1893 | 19860424 |
| FI 8601725 | A | 19861025 | FI 1986-1725 | 19860424 |
| JP 61281055 | A2 | 19861211 | JP 1986-93512 | 19860424 |
| PRIORITY APPLN. INFO.: | | | US 1985-726536 | A 19850424 |
| | | | US 1985-727657 | A 19850426 |

ED Entered STN: 07 Feb 1987
 AB An aqueous admixt. for fluid concrete mixts. comprises a water-reducing agent, a water-soluble polymer composition, and water, and optionally an antifoaming agent and/or a viscosity reducing agent. The polymer may be a cellulose ether and may be temporarily crosslinked with a dialdehyde, e.g., glyoxal, with crosslinking reversed by a hydroxide, e.g., NH4OH. Thus, 11 kg portland cement was dry mixed with 1.63 g hydroxypropyl methylcellulose (with hydroxypropyl molar substitution .apprx.0.1-0.35, methoxy substitution .apprx.1.1-2, and viscosity .apprx.400 cP at 25° as a

2% solution), the mixture was mixed with .apprx.23 kg sand and .apprx.23 kg gravel (mainly >0.9 cm diameter), .apprx.3.5 g air-entraining agent Grace AEA was added to provide final air content 5.5%, and .apprx.219 g Mighty 150 and .apprx.4.4 kg water were added. The concrete had 10-, 20-, and 90-min slump 7.2, 7.2, and 3.5 in., resp., vs. 7.2, 6.0, and 0.5 in., resp., without the cellulose derivative

IC ICM C04B028-04

ICI C04B028-04, C04B022-06, C04B024-02, C04B024-12, C04B024-38, C04B024-42

CC 58-2 (Cement, Concrete, and Related Building Materials)

IT Alcohols, uses and miscellaneous

RL: USES (Uses)

(viscosity-reducing agent, in admixts. for concrete for controlled fluidity)

IT 1336-21-6, Ammonium hydroxide

RL: USES (Uses)

(crosslink-reversing agent, for cellulose ethers in concrete admixts.)

IT 67-63-0, Isopropanol, uses and miscellaneous 102-71-6, Triethanolamine, uses and miscellaneous

RL: USES (Uses)

(viscosity-reducing agent, in admixts. for concrete for controlled fluidity)

L23 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:580314 CAPLUS

DOCUMENT NUMBER: 103:180314

TITLE: Reduction of the viscosity of high solids pigment slurries

INVENTOR(S): Lawhorne, Earl R.

PATENT ASSIGNEE(S): American Cyanamid Co., USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------|------|----------|-----------------|----------|
| US 4536268 | A | 19850820 | US 1984-588264 | 19840312 |
| EP 156138 | A2 | 19851002 | EP 1985-101423 | 19850211 |
| EP 156138 | A3 | 19851218 | | |
| EP 156138 | B1 | 19880810 | | |
| R: BE, CH, DE, FR, GB, IT, LI, NL, SE | | | | |
| CA 1243274 | A1 | 19881018 | CA 1985-476032 | 19850308 |

PRIORITY APPLN. INFO.: US 1984-588264 A 19840312

ED Entered STN: 30 Nov 1985

AB A process is described for the reduction of viscosity of high-solids-content, aqueous pigment slurries, in which the slurries are subjected to electrodialysis utilizing an NH₄ salt or dilute acid solution as the anolyte. Thus, a slurry is prepared from uncalcined anatase TiO₂. This slurry is visibly flocculated even at 37% solids content. The slurry is placed in a cathode compartment of a dialysis device and a solution of 50 g/L NH₄Cl is placed in the anode compartment. The d.c. current from two 1.50 batteries is passed through the system for 30 min. The Brookfield viscosity of the slurry measured with RV-4 spindle at 100 rpm decreased from 1520 to 565 cp.

IC ICM B01D057-02

INCL 204182400

CC 49-3 (Industrial Inorganic Chemicals)
Section cross-reference(s): 42, 43, 66

ST viscosity redn electrolytic pigment slurry; titanium
dioxide pigment slurry viscosity redn
IT Electrodialysis
(of pigment slurries, for reduction of viscosity)
IT Viscosity
(reduction of, in pigment slurries, by electrodialysis)
IT 1336-21-6 7783-20-2, uses and miscellaneous 12125-02-9, uses
and miscellaneous
RL: USES (Uses)
(electrolyte, in electrodialysis of titanium dioxide slurries, for
viscosity reduction)
IT 13463-67-7, uses and miscellaneous
RL: USES (Uses)
(slurry of, electrodialysis of, for viscosity redn
.)

L23 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:159382 CAPLUS
DOCUMENT NUMBER: 100:159382
TITLE: Coal compositions
INVENTOR(S): Keller, Douglas V., Jr.; Simmons, Frederick J.
PATENT ASSIGNEE(S): Otisca Industries Ltd., USA
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|------------|
| WO 8304416 | A1 | 19831222 | WO 1982-US790 | 19820610 |
| W: AU, DE, GB, JP, SE, US | | | | |
| AU 8287346 | A1 | 19831230 | AU 1982-87346 | 19820610 |
| GB 2131453 | A1 | 19840620 | GB 1984-3021 | 19820610 |
| US 4515602 | A | 19850507 | US 1982-406730 | 19820610 |
| PRIORITY APPLN. INFO.: | | | WO 1982-US790 | A 19820610 |

ED Entered STN: 12 May 1984

AB To prepare a coal-water slurry, coal ($\leq 250\text{-}\mu\text{m}$) was mixed with 30 weight% water, and the mixture (at pH 8) was ground in a ball mill for 16 h. The resulting slurry was diluted to 10 weight% solids, and the coal particles were agglomerated with C2HCl3-CHF3 in a blender and separated over a sieve. The particles were redispersed in water to give a slurry containing 50 weight% solids with absolute viscosity 3300 cP at 5/s shear. The viscosity was decreased significantly when 0.45-1.8 weight% (dry coal basis) of Aerosol A-102 [39354-45-5], Emcol P10-59 [56833-00-2], or NH4OH was added.

IC C10L001-32; C10L001-12; C10L001-22; C10L001-14
CC 51-17 (Fossil Fuels, Derivatives, and Related Products)
IT Surfactants
(in coal-water slurries, viscosity reduction by)
IT 1336-21-6 39354-45-5 56833-00-2
RL: USES (Uses)
(surfactants, in coal-water slurries, viscosity redn
by)

L23 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:76972 CAPLUS
DOCUMENT NUMBER: 92:76972
TITLE: Formation of ultrafine polymer latex by emulsion
polymerization process

AUTHOR(S): Yamazaki, Shinsuke
 CORPORATE SOURCE: Natl. Chem. Lab. Ind., Yatabe, 305, Japan
 SOURCE: Kobunshi Ronbunshu (1979), 36(11), 729-37
 CODEN: KBRBA3; ISSN: 0386-2186

DOCUMENT TYPE: Journal
 LANGUAGE: Japanese

ED Entered STN: 12 May 1984

AB Transparent poly(Me methacrylate) (I) [9011-14-7] latexes having particles of $<0.05 \mu$ diameter were prepared by use of Na lauryl sulfate as emulsifier and by addition of a small amount of Cu^{2+} in the $\text{K}_2\text{S}_2\text{O}_8/\text{Na}_2\text{S}_2\text{O}_3$ initiator system. Addition of an electrolyte [e.g., $(\text{NH}_4)_2\text{HPO}_4$] at 0.1-0.5% to the ultrafine I latex remarkably reduced the apparent viscosity of the latex (at $>25\%$ concentration). Change in the fluidizing character of the latex of very high viscosity by electrolyte addition was explained by destruction of an ice-like hydration shell of sufficient thickness for close packing and by the effect of particle spacing on the latex viscosity.

CC 35-3 (Synthetic High Polymers)

IT Viscosity

(reduction of, of ultrafine polymer latexes, by addition of electrolytes)

IT Electrolytes

(viscosity reduction by, of ultrafine polymer latexes)

IT 9011-14-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(ultrafine latexes of, preparation of, electrolyte addition for reduction of viscosity in)

IT 104-15-4, uses and miscellaneous 1336-21-6 7447-40-7, uses and miscellaneous 7783-28-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(viscosity reduction by, in preparation of poly(Me methacrylate) ultrafine latexes)

L23 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1967:465540 CAPLUS

DOCUMENT NUMBER: 67:65540

TITLE: Amine-formaldehyde resin solutions of decreased reactivity, and their mixtures with film-forming proteins

INVENTOR(S): Ritson, Daniel D.

PATENT ASSIGNEE(S): American Cyanamid Co.

SOURCE: U.S., 3 pp.
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| US 3321418 | | 19670523 | US 1965-449884 | 19620730 |

ED Entered STN: 12 May 1984

AB The amount of free HCHO in amine formaldehyde resins is reduced by adding NH_4OH to the resin solution before the addition of the film-forming protein, thereby preventing large viscosity increases. Thus, 9 ml. 60% NH_4OH was added to a 100-g. sample of a resin solution containing an equimolar mixture of tris(hydroxymethyl)bis(methoxymethyl)melamine and an 80% methylated bis(hydroxymethyl)urea, and the mixture was allowed to stand several hrs. A casein paper-coating composition was prepared from 15% ammonium caseinate solution

333, H_2O 82, and a 68 weight % clay slurry 735 g. Various amts. of resin

were added to 256-g. samples of the paper-coating composition, and the mixts. were coated onto raw stock sheets, dried at 300°F. for 1 min., and calendered. The wet-rub resistance was tested, using 0.02% NaOH solution, on a scale on which 10 designated no coating removal and 0 rapid and extensive removal (resin, g. resin added, cp. viscosity, and wet-rub rating given): none, 0, 1208, 2; untreated resin solution, 1.4 diluted with 1.4 g. H₂O, 4160, 9; treated resin solution, 1.5 diluted with 1.3 g. H₂O, 2440, 9.

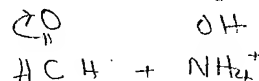
INCL 260007000

CC 42 (Coatings, Inks, and Related Products)

IT Aminoplasts

RL: USES (Uses)

(viscosity decrease or control of, by reaction of ammonium hydroxide with free formaldehyde)



IT 1336-21-6

RL: USES (Uses)

(aminoplast treatment with, for viscosity control in coatings, and reaction with free formaldehyde in relation thereto)

IT 108-78-1, Melamine

RL: USES (Uses)

(polymers with formaldehyde, viscosity decrease or control of, by reaction of ammonium hydroxide with free formaldehyde)

L40 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:701158 CAPLUS

DOCUMENT NUMBER: 121:301158

TITLE: Allosteric Interaction of Metal Ions with Saccharides in a Crowned Diboronic Acid

AUTHOR(S): Deng, Gang; James, Tony D.; Shinkai, Seiji

CORPORATE SOURCE: Chemirecognics Project, Research Development Corporation of Japan, Kurume, 830, Japan

SOURCE: Journal of the American Chemical Society (1994), 116(11), 4567-72

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A diboronic acid saccharide (covalent) receptor site and crown metal ion (electrostatic) receptor site are successfully coupled in an allosteric system. The binding of monosaccharides with 2b as intramol. 1:1 complexes was monitored by CD (CD). Added calcium perchlorate reduces the binding of the 1:1 saccharide complexes as followed by a decrease in the CD activity. This is a novel allosteric system which mimics the action of the Na⁺/D-glucose cotransport protein in nature.

L40 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:84939 CAPLUS

DOCUMENT NUMBER: 114:84939

TITLE: Novel breaker/filtration process reduces the cost of recycling viscosified brine completion fluids

AUTHOR(S): McIntyre, James A.; Kalnins, John M.; Varjian, Richard D.; Powell, John

CORPORATE SOURCE: Dow Chem. Co., USA

SOURCE: SPE Production Engineering (1990), 5(4), 469-74

CODEN: SPENES; ISSN: 0885-9221

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A process for recycling polysaccharide-thickened brine completion fluids was developed. The process uses oxidants generated directly in the used

brine by electrolysis to break the viscosity. The treated brines can be filtered with conventional equipment, rethickened, and reused. The process was applied on a laboratory scale to Br-/Cl- brines containing Na⁺, K⁺, Ca²⁺, and Zn²⁺ cations. Calcns. with information from pilot-scale tests on NaBr/NaCl brines indicate that the process should be attractive economically.

L40 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1965:451449 CAPLUS
DOCUMENT NUMBER: 63:51449
ORIGINAL REFERENCE NO.: 63:9339h,9340a
TITLE: The nitrogen isotopic separation factors of various organic amines on Amberlite IR-120 cation-exchange resin
AUTHOR(S): Nowlin, Duane D.; Powell, Jack E.
CORPORATE SOURCE: Iowa State Univ., Ames
SOURCE: U.S. At. Energy Comm. (1964), IS-1059, 87 pp.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ion-exchange displacement chromatography was used to measure the N isotopic separation factors of ten organic amines and NH₄OH. A column of Amberlite IR-120 H⁺-form resin was used, and the aqueous amine solns. were approx. 0.125N. The amines were passed through the column, and the fractions collected were decomposed by a Kjeldahl method. The liberated NH₃ samples were treated with NaOBr in a special vacuum apparatus to convert the NH₄ to free N, which was collected in bulbs and analyzed on a mass spectrometer. The separation factors of the compds. investigated were: NH₄OH 1.0254, MeNH₂ 1.0223, EtNH₂ 1.0218, PrNH₂ 1.0199, Me₂CHNH₂ 1.0197, BuNH₂ 1.0183, Me₂NH, 1.0174, Et₂NH 1.0172, Pr₂NH 1.0159, Me₃N 1.0130, and Et₃N 1.0117. It is proposed that the primary factor affecting these factors is the ratio of the ionization consts. for the 2 pure isotopic forms of the amines. By using these ratios it was possible to predict what happened to the separation factors as the temperature, concentration, or external solvent was changed.
88 references.

L40 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1964:6672 CAPLUS
DOCUMENT NUMBER: 60:6672
ORIGINAL REFERENCE NO.: 60:1175a-b
TITLE: Hydration and solubility of rare earth salts of tricarballic acid (1,2,3-propanetricarboxylic acid)
AUTHOR(S): Gupta, Asim K.; Powell, Jack E.
CORPORATE SOURCE: Iowa State Univ., Ames
SOURCE: U.S. At. Energy Comm. (1963), IS-657, 12 pp.
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Rare earth tricarballicates were prepared by mixing cold aqueous solns. of a rare earth chloride and of equivalent amts. of the di- or trisodium salt of tricarballic acid. The hydration number was 5 for the La salt and 4 for the salts of all other rare earth metals. The solubility in 100 g. H₂O at 20-60° was 0.02 g. for the salt of La, 0.012 g. for Ce, Pr, and Nd, and <0.005 g. for all the others from Sm to Y.

L40 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1957:97558 CAPLUS
DOCUMENT NUMBER: 51:97558
ORIGINAL REFERENCE NO.: 51:17551i,17552a
TITLE: Preparation of carbonate-free bases
AUTHOR(S): Powell, Jack E.; Hiller, Maynard A.

CORPORATE SOURCE: Inst. Atomic Research, Ames, IA
 SOURCE: Journal of Chemical Education (1957), 34, 330
 CODEN: JCEDA8; ISSN: 0021-9584

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB KOH solution is treated with excess Ba(OH)₂, filtered (with ascarite protection from air), diluted with boiled water, passed through a strong acid cation exchange bed in the K⁺ cycle which removes the Ba⁺⁺, and the effluent KOH is collected in a flask containing He. Resins preferred are Dowex-50 or Amberlite IR-120. The resulting KOH is free of Cl⁻ and CO₃⁻⁻. The method is also good for NaOH and NH₄OH.

L40 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1956:26627 CAPLUS

DOCUMENT NUMBER: 50:26627

ORIGINAL REFERENCE NO.: 50:5363f-h

TITLE: A laboratory method for separating nitrogen isotopes by ion exchange

AUTHOR(S): Spedding, F. H.; Powell, J. E.; Svec, H. J.

CORPORATE SOURCE: Iowa State Coll., Ames

SOURCE: Journal of the American Chemical Society (1955), 77, 6125-32

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. C.A. 49, 10702g. Principles derived in the separation of rare earths are applied to an ion-exchange process for separating N₁₄ and N₁₅. NH₄ as the hydroxide, and NaOH as the eluant, are used to obtain sharply defined front and rear edges to the adsorbed band of NH₄⁺ on the resin Dowex 50-X12. The isotopic equilibrium constant between dilute NH₄OH solution and the NH₄

form of the resin, $K = RR/RS = 1.0257$, where RR and RS are the N₁₄/N₁₅ ratios in the resin and aqueous phases, resp. An adsorbed NH₄⁺ band 7-10 ft. long, eluted about 39 times its length is necessary to achieve over 99% isotope separation. The mole fraction of N₁₅ in original solution is 0.00365.

N₁₅

is deposited at the rear edge, and N₁₄ enriched at the leading edge as the band is eluted along the column. The calcn. of height equivalent to a theoretical plate (HETP) under steady state conditions is given, and factors which affect HETP, such as flow rate and concentration of NaOH, were experimentally determined. Factors in efficient operation are discussed, and a method of continuous operation using a series of resin beds is described.

L40 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1955:55692 CAPLUS

DOCUMENT NUMBER: 49:55692

ORIGINAL REFERENCE NO.: 49:10702g-h

TITLE: A laboratory method for separating nitrogen isotopes by ion exchange

AUTHOR(S): Spedding, F. H.; Powell, J. E.; Svec, H. J.

CORPORATE SOURCE: Iowa State Coll., Ames

SOURCE: Journal of the American Chemical Society (1955), 77, 1393

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. C.A. 48, 13529fg. Although isotopic exchange consts. are smaller than the exchange consts. for adjacent rare earths, a study of theory suggested that isotopes might be banded if the band was eluted a greater distance. A bank of columns 4 in. by 5 ft. filled with sulfonated cation-exchange

resin (H form) was connected in series. Five l. 15N NH4OH diluted 30-fold and adsorbed on the columns gave a band 10 ft. long; this was eluted with 0.5N NaOH. After traveling 50 band lengths most of the N15 was concentrated in the last 6 in. of the band and the original isotopic ratio, N15/N14, of 0.00365 had increased to more than 0.25. When the last 2% of the NH3 from such a run was adsorbed on 1-in. columns and eluted an addnl. 100 ft., the mole % of N15 at the last part of the fraction exceeded 74%.

L40 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1950:12179 CAPLUS

DOCUMENT NUMBER: 44:12179

ORIGINAL REFERENCE NO.: 44:2395d-f

TITLE: Loss of developability of photographic emulsions caused by washing in weak silver halide solvents: a new reversal effect

AUTHOR(S): James, T. H.

CORPORATE SOURCE: Eastman Kodak Co., Rochester, NY

SOURCE: Journal of Colloid Science (1949), 4, 561-9

CODEN: JCSCA7; ISSN: 0095-8522

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The develop ability of several pos.-type photographic emulsions is decreased by washing the exposed film in a 2% Na2SO3 solution before development. The maximum d. obtained on development decreases regularly with increasing time of washing. Agitation of the washing bath markedly accelerates this effect. A reversal occurs in the high exposure areas, and the d. in the highest exposure areas may decrease to less than half the d. maximum. No reversal occurs if laurylpyridinium p-toluenesulfonate is added to the wash solution. Other solns. that decrease developability are 0.3-1.0 M NH4OH, and also 0.183% Na2S2O3. Loss of Ag halide on washing can only partially account for the observed loss of developability and nucleus isolation is suggested. The main factor leading to the reversal is probably a charge effect acting upon the rate of solution of the Ag halide.

=>